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Changes

The material in this document is for information only and subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, LaCie assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein. LaCie reserves the right to make changes or revisions in the product design or the product manual without reservation and without obligation to notify any person of such revisions and changes.

Canada Compliance Statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

FCC Statement

LaCie Ethernet Disk
Tested to comply with FCC standards for home or office use

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. The devices may not cause harmful interference
2. The devices must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications to this product not authorized by LaCie could void the FCC & Industry Canada regulations and negate your authority to operate the product.

Manufacturer's Declaration for CE Certification

We, LaCie, solemnly declare that this product conforms to the following European standards: Class B Class B EN60950, EN55022, EN50082-1, EN61000-3-2

With reference to the following conditions: 73/23/EEC Low Voltage Directive; 89/336/EEC EMC Directive

CAUTION: Modifications not authorized by the manufacturer may void the user's authority to operate this device.

CAUTION: This LaCie hard drive's warranty may be void as a result of the failure to respect the precautions listed above.

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designed collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service, or the shop where you purchased the product.

Health and Safety Precautions

- Only qualified persons are authorized to carry out maintenance on this device.
- Read this User's Guide carefully, and follow the correct procedure when setting up the device.
- Do not open your LaCie Ethernet Disk or attempt to disassemble or modify it. Never insert any metallic object into the drive to avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions. Your LaCie Ethernet Disk contains no user-serviceable parts. If it appears to be malfunctioning, have it inspected by a qualified LaCie Technical Support representative.
- Never expose your device to rain, or use it near water, or in damp or wet conditions. Never place objects containing liquids on the LaCie Ethernet Disk, as they may spill into its openings. Doing so increases the risk of electrical shock, shortcircuiting, fire or personal injury.
- Make sure that the computer and LaCie Ethernet Disk are electrically grounded. If the devices are not grounded, there is an increased risk of electrical shock.

General Use Precautions

- Do not expose the LaCie Ethernet Disk to temperatures outside the range of 5° C to 35° C (41° F to 95° F). Doing so may damage the LaCie Ethernet Disk or disfigure its casing. Avoid placing your LaCie Ethernet Disk near a source of heat or exposing it to sunlight (even through a window). Inversely, placing your LaCie Ethernet Disk in an environment that is too cold or humid may damage the unit.
- Always unplug the LaCie Ethernet Disk from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Use only the power supply shipped with the device.
- Do not use the LaCie Ethernet Disk near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
- Do not place the LaCie Ethernet Disk near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of your LaCie Ethernet Disk.
- Do not place heavy objects on top of the LaCie Ethernet Disk or use excessive force on it.
- Never use excessive force on your LaCie Ethernet Disk. If you detect a problem, consult the 12. Troubleshooting section in this manual.
- Protect your LaCie Ethernet Disk from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Never use benzene, paint thinners, detergent or other chemical products to clean the outside of the LaCie Ethernet Disk. Such products will disfigure and discolor the casing. Instead, use a soft, dry cloth to wipe the device.

CAUTION: A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

IMPORTANT INFO: Any loss, corruption or destruction of data while using a LaCie drive is the sole responsibility of the user, and under no circumstances will LaCie be held liable for the recovery or restoration of this data. To help prevent the loss of your data, LaCie highly recommends that you keep **TWO** copies of your data; one copy on your external hard drive, for instance, and a second copy either on your internal hard drive, another external hard drive or some other form of removable storage media. LaCie offers a complete line of CD and DVD drives. If you would like more information on backup, please refer to our website.

IMPORTANT INFO: 1GB = 1,000,000,000 bytes. 1TB = 1,000,000,000,000 bytes. Once formatted, the actual available storage capacity varies depending on operating environment (typically 10-15% less).

1. Introduction

Share information across diverse platforms, over a network or over the Web. The LaCie Ethernet Disk is the first hard drive that can be connected to a network, without any technical expertise. You'll be able to easily communicate by sharing content with others over a network to collaborate on multiple projects for greater workgroup productivity. Just plug the LaCie Ethernet Disk to any Ethernet, or Gigabit Ethernet, port and start sharing the disk among as many as 25 users at the same time.

Open a new world of connectivity and flexible information management by instantly adding storage space to users on a network, and expand the capacity by simply daisy-chaining additional Hi-Speed USB 2.0 hard drives. Powered by Windows XP® Embedded, the LaCie Ethernet Disk is affordable, secure and compatible with all platforms, including Windows, Mac, Linux and UNIX.

The LaCie Ethernet Disk was designed to easily integrate into any environment. Engineered to be rack mountable, you can quickly and easily place the LaCie Ethernet Disk into your standard 19-inch computer equipment racks, or if you prefer seamlessly incorporate it into workstation configurations as a standalone or stackable device.

With all it can do for you, we're confident that your LaCie Ethernet Disk will quickly become an important tool in your day-today business and personal computing.

TECHNICAL NOTE: While the LaCie Ethernet Disk supports 25 users connected simultaneously, it is highly recommended that not all 25 users transfer files at the same time because this may cause the system to become overloaded. LaCie recommends that no more than 10 users transfer files at the same time. Gigabit speeds available only on models with Gigabit Ethernet port.

2. Your LaCie Ethernet Disk

2.1. Minimum System Requirements

Client's Minimum Requirements:

- TCP/IP enabled network
- Microsoft Windows 95, 98, Me, NT, 2000, XP
- Mac OS 9.x, 10.x
- Any computer with a browser
- Any computer with an FTP client

LaCie Network Assistant's Minimum Requirements:

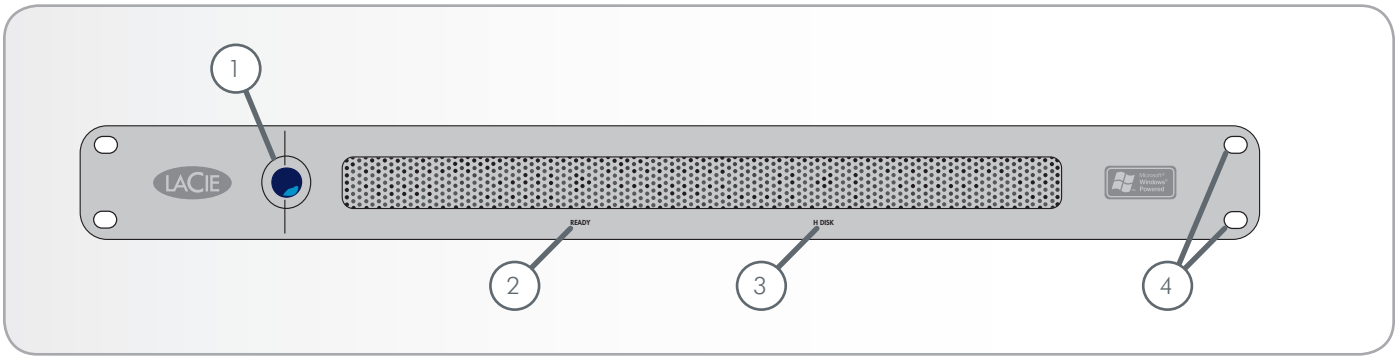
- Microsoft Windows XP and Vista
- Mac OS 10.3 or higher
- Linux version with a graphic environment
- UNIX version with a graphic environment and Java 1.1.x or higher

2.2. Box Content

1. LaCie Ethernet Disk
2. Ethernet cable
3. Power cable
4. LaCie Ethernet Disk Utilities CD-ROM
5. Quick Install Guide

IMPORTANT INFO: Please save your packaging. In the event that the drive should need to be repaired or serviced, it must be returned in its original packaging.

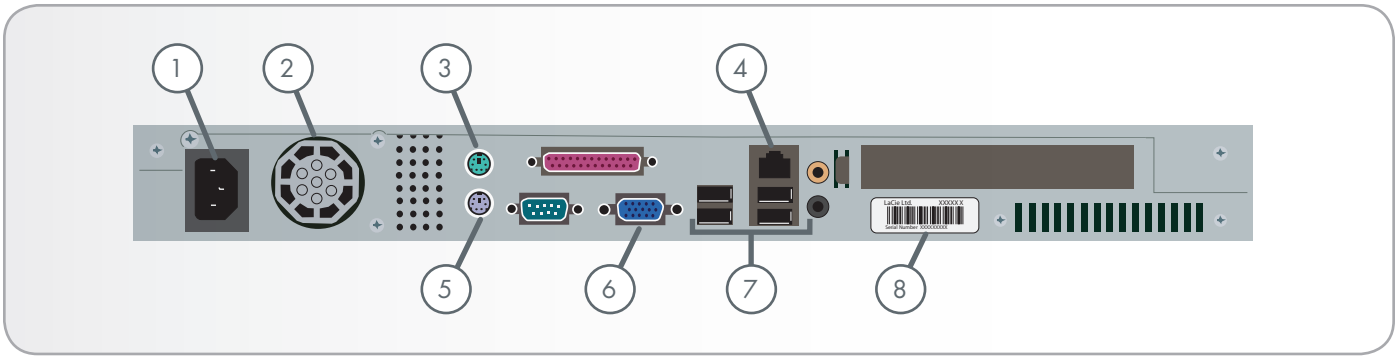
2.3. Front Panel



1. **Power Button** – Used to turn the LaCie Ethernet Disk on and off. You can turn on the Ethernet Disk by pressing the Power button (see *4.2. Turning On Your LaCie Ethernet Disk*). You can also shutdown the Ethernet Disk by pressing the power button on the front of the drive once the LaCie Ethernet Disk will shutdown shortly afterwards. In an emergency you can force the LaCie Ethernet Disk to shutdown by pressing and holding in the power button for five seconds; please note that this method may cause data corruption or data loss.
2. **Ready Light** – Indicates that the LaCie Ethernet Disk is ready to serve files.
3. **Disk Light** – Indicates when the LaCie Ethernet Disk is being accessed.
4. **Rackmount Brackets** – Attaches your LaCie Ethernet Disk in standard, 19" computer equipment racks. See *3.2. Rack Installation* for more details.

IMPORTANT INFO: The recommended method to turn off the Ethernet Drive is to use the Web Administration tool; on the Server tab, click the Shutdown button, (see *7.5. Shutting Down the Ethernet Disk* for detailed steps.)

2.4. Rear Panel



1. **Power Input –** Where you plug in the AC adapter supplied with the drive. See section *4.1. Connecting the LaCie Ethernet Disk to Your Network* for more details.
2. **Ventilation Fan** – This fan helps to keep your drive cool during operation. Be sure not to block this fan when using your drive..
3. **Mouse Port** – This port can be used to connect a mouse (not recommended).
4. **Gigabit Ethernet Port** – This port is used to connect the Ethernet cable (included with your drive). See section *4.1. Connecting the LaCie Ethernet Disk to Your Network* for more details.
5. **Keyboard Port** – This port can be used to connect a keyboard (not recommended).
6. **VGA Video Port** – This VGA video port can be used to connect a monitor (not recommended).
7. **Hi-Speed USB 2.0 Ports** – These ports can be used to attach additional hard drives. Please see section *10. Adding Additional Storage Space* for more information.
8. **Serial Number Sticker** – This is where you will find your LaCie Ethernet Disk's serial number. Write down the serial number and keep it in a safe place, because you will need to provide the number in the event you have to call LaCie Technical Support for any reason in regard to the drive's performance. The serial number would also come in handy if your drive is lost or stolen.

3. Setting Up Your LaCie Ethernet Disk

Your LaCie Ethernet Disk was designed to allow quick and easy installation.

3.1. Stand-alone Installation

If you do not want to install the LaCie Ethernet Disk into a rack, you can place it on a tabletop as you would a desktop or workstation (*Fig. 01*).

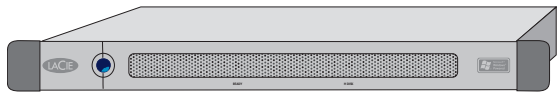


Fig. 01

3.2. Rack Installation

The LaCie Ethernet Disk fits easily into standard 19" computer equipment racks (*Fig. 02*).

Carefully slide the LaCie Ethernet Disk into a shelf space in the rack. Use your equipment rack's screws to secure the device in place in the rack.

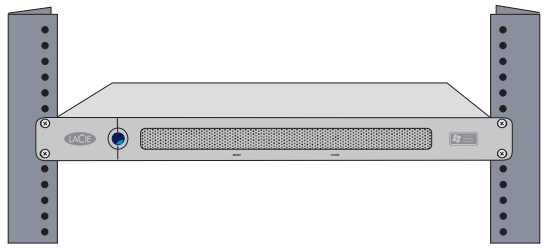


Fig. 02

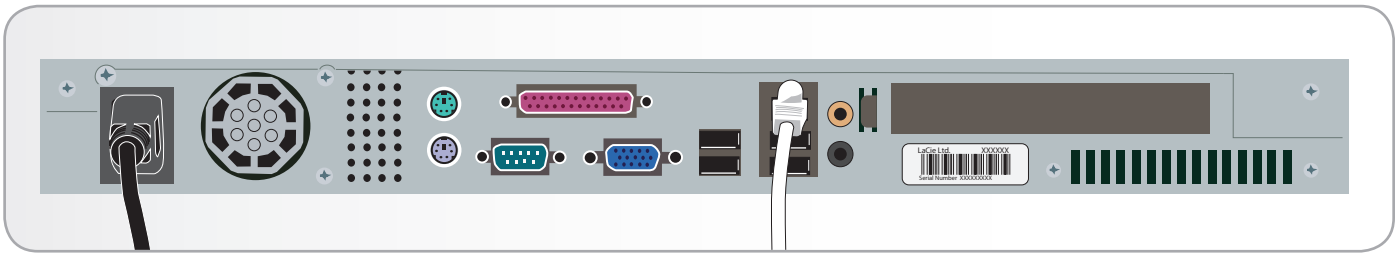
IMPORTANT INFO: Please refer to your equipment rack's documentation for specific details about device weight and installation instructions.

CAUTION: Once you have mounted the LaCie Ethernet Disk, do not set heavy objects on top of the unit (the LaCie Ethernet Disk can support up to 25 kilos).

4. Installing Your LaCie Ethernet Disk

The LaCie Ethernet Disk is compatible with either 10BaseT or 100BaseTX, or Gigabit.

4.1. Connecting the LaCie Ethernet Disk to Your Network



1. Connect the included AC power cord to your LaCie Ethernet Disk, and then plug the other end to an AC wall outlet.
2. Connect to the Gigabit Ethernet port using the Ethernet cable provided.

TECHNICAL NOTE: If your primary system is not part of a network, or you want to connect the LaCie Ethernet Disk directly to another computer, connect the LaCie Ethernet Disk using a network crossover cable.

4.2. Turning On Your LaCie Ethernet Disk

Press the power button on the front of the drive and wait for the LaCie Ethernet Disk to start up. Once the Ready light is on and stays lit, the LaCie Ethernet Disk will be ready to use.

5. Configuring Your LaCie Ethernet Disk

Before your users can access and use the LaCie Ethernet Disk, you have to make sure the correct IP address and network settings are assigned to the unit.

5.1. Connecting Using LaCie Network Assistant

LaCie Network Assistant detects all network attached storage devices on your network and gives you easy ways to connect to or configure them.

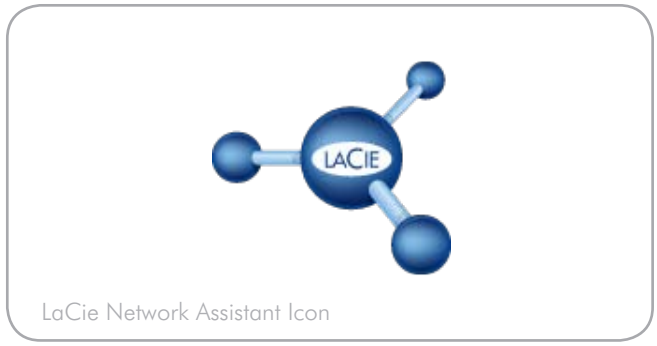
Once installed and running, Network Assistant will appear in your task bar (Windows users, *Fig. 03*) or in the menu bar (Mac users, *Fig. 04*) and automatically search for storage devices on your network. When a new device is found, an info bubble containing the name of the device will appear.

When Network Assistant finds your LaCie Ethernet Disk, you can connect to any of the shares on the Ethernet Disk, log in to the Administration Page, or configure the Ethernet Disks's network settings, all from the Network Assistant menu.

Install LaCie Network Assistant:

1. Insert the LaCie Ethernet Disk CD-ROM into your computer's CD-ROM drive.
2. Windows users, the CD should appear in My Computer. Mac users, the CD should appear on the desktop. Double-click the CD icon, then double-click **"LaCie Network Assistant Setup"**.
3. Follow the Wizard to complete installation.

(continued on next page)



LaCie Network Assistant Icon

Fig. 03

Fig. 04

Launch the Administration Page

Windows Users

1. Select LaCie Network Assistant in Start/Programs. A Network Assistant icon will appear in the system tray and Network Assistant will automatically detect your LaCie Ethernet Disk and any other LaCie storage devices on your network.
2. Click on the icon in the system tray and select **Configuration Window...** from the LaCie Ethernet Disk sub-menu (*Fig. 05*). The LaCie Network Assistant page will open.
3. Under the **Network** tab, click the **Web configuration page** link (*Fig. 06*).
4. To log in to LaCie Ethernet Disk administration (*Fig. 07*), enter:

   Login: **administrator**
   Password: **admin**
5. Click **Log on**.

Continue to section *7. Using the Web Administration Page*.

Mac Users

1. Double click LaCie Network Assistant in your Applications folder. An Network Assistant icon will appear in the menu bar and the Assistant will automatically detect your LaCie Ethernet Disk and any other LaCie storage devices on your network.
2. Click on the icon in the menu bar and select **Configuration Window...**. The LaCie Network Assistant page will open.
3. On the Network tab, click the **Web configuration page** link (*Fig. 06*).
4. To log in to LaCie Ethernet Disk administration (*Fig. 07*), enter:

   Login: **administrator**
   Password: **admin**
5. Click **Log on**.

Continue to section *7. Using the Web Administration Page*.

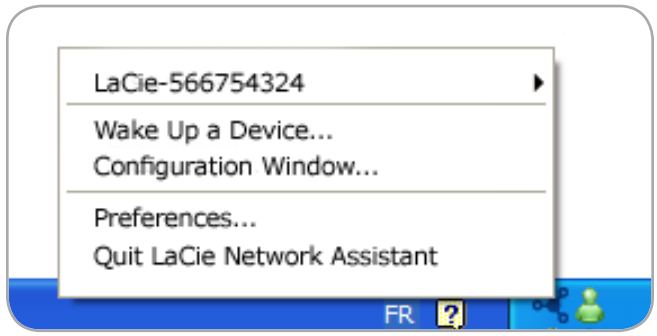


Fig. 05

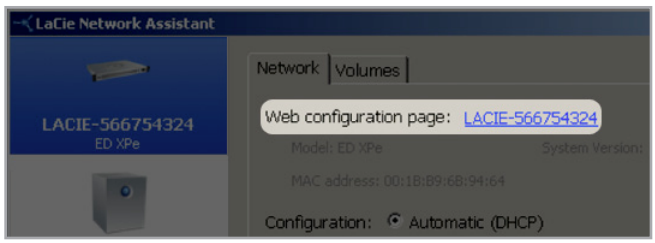


Fig. 06

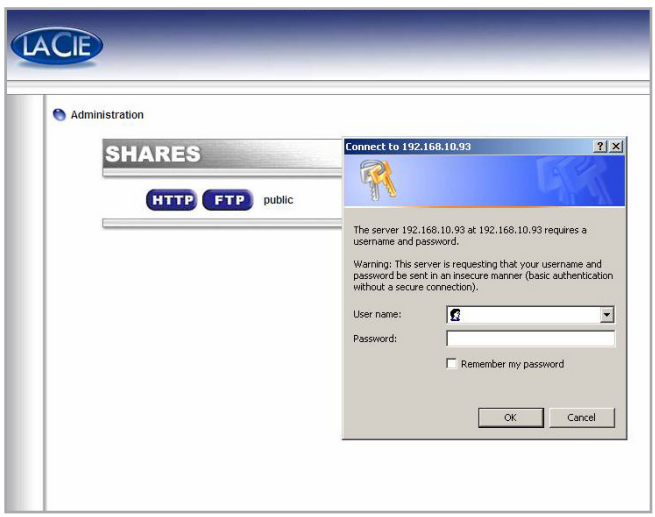


Fig. 07

5.2. Configuring the LaCie Ethernet Disk on a Network Without a DHCP Server

Most home networking routers are DHCP servers, meaning the router assigns an IP address to all devices on the network to allow devices to find each other. If your network does not have DHCP server, you may need to manually assign your LaCie Ethernet Disk an IP address and other network information.

The easiest way to modify your LaCie Ethernet Disk's network configuration is to use the LaCie Network Assistant. See section *5.1. Connecting Using LaCie Network Assistant* for information on installing the network configuration software.

1. Start LaCie Network Assistant (see section *5.1. Connecting Using LaCie Network Assistant*).
2. **Windows Users:** Click on the LaCie Network Assistant icon in the system tray and select **Configuration Window...** (*Fig. 08*). The LaCie Network Assistant Configuration window opens (*Fig. 09*).

   Mac users: Click on the LaCie Network Assistant icon in the menu bar and select **Network Configuration**... (*Fig. 10*). The LaCie Network Assistant Configuration window opens (*Fig. 09*).
3. Click the **Network** tab.
4. Select **Manual**.

TECHNICAL NOTE: If the fields (IP address, Subnet mask, etc.) are filled when **Automatic (DHCP)** is selected, you do not need to make manual settings. Leave **Automatic** selected.

5. Modify the network settings to work with your network.
6. Click **Apply**.

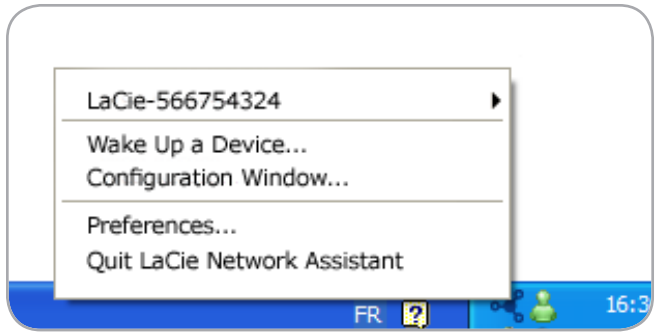


Fig. 08

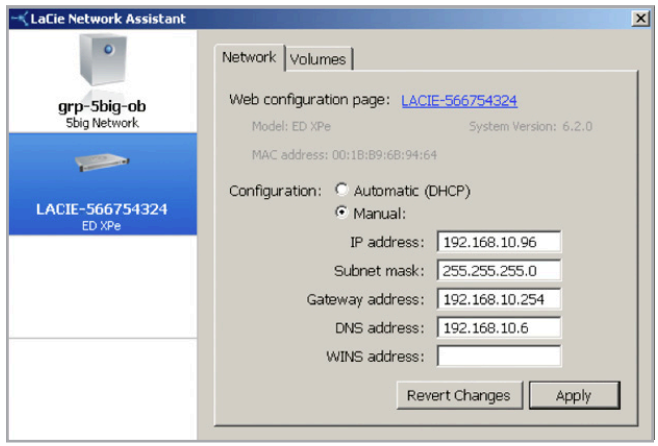


Fig. 09

Fig. 10

5.3. Using Ethernet Disk with Apple™ Time Machine

The Ethernet Disk can be selected as a target for Apple's Time Machine software, which automatically backs up internal hard drives onto external volumes. From the web administration page, you can grant Time Machine compatibility to the shares you would like to use. Once set up, Time Machine will recognize the share as a valid backup destination. For more details on using Time Machine, refer to Apple's documentation.

Follow these steps to use make the Ethernet Disk's share's available for use with Time Machine:

1. Make sure that you have installed and are running the LaCie Network Assistant. See section *5.1. Connecting Using LaCie Network Assistant* for details.
2. Click on the LaCie Network Assistant icon in your task bar (Windows users, *Fig. 11*) or menu bar (Mac users, *Fig. 12*) and select "Web Access". The web administration page will open.
3. Click the Administration link (*Fig. 13*).
4. Login using the default username and password (or, if you have modified them, use your username and password) and click Log On. The default username and password are:

   Login: administrator
   Password: admin
5. In the page that loads, click on the Shares tab.
6. Click on the share that you wish to make available to Time Machine as a backup destination.
7. On the page that opens, tick the Apple box and then the Time Machine box (*Fig. 14*).
8. This Ethernet Disk share is now set up to use with Time Machine, and can be selected as a valid backup destination from within the Time Machine software.

Fig. 11

Fig. 12

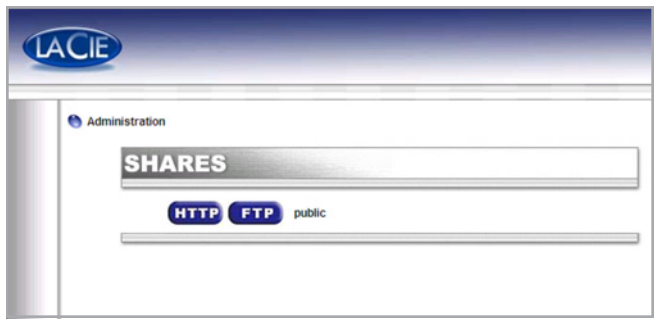


Fig. 13

Fig. 14

6. Accessing Your Ethernet Disk Over the Network

Use LaCie Network Assistant to access your shared folder(s) (see section *5.1. Connecting Using LaCie Network Assistant*).

6.1. Accessing Shared Folders

When your computer is connected to your local area network, LaCie Network Assistant will help you quickly connect to the shared folder(s) on your LaCie Ethernet Disk.

To access shared folders (all users):

1. Run the LaCie Network Assistant (LNA). Click on the LNA icon in the system tray (Windows users, *Fig. 15*) or menu bar (Mac users *Fig. 16*).
2. Select **Share** (default) or the name of any other share you have created from the LNA menu. The share will open in a Windows Explorer or Mac Finder window.

TECHNICAL NOTE: You may need to enter the username and password for "share." The defaults are:

Login: administrator
Password: admin

Your system may remember this information and might not ask for it during the same session.

3. Simply drag and drop files to and from this window, just like a regular folder.

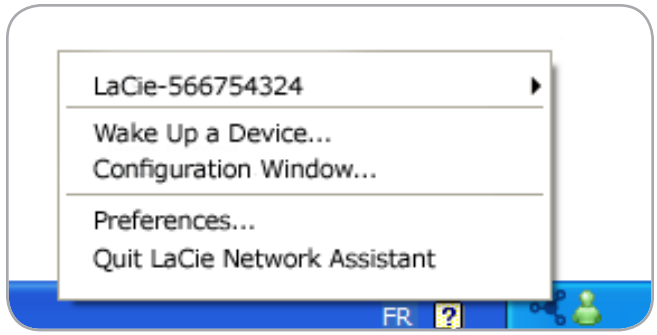


Fig. 15

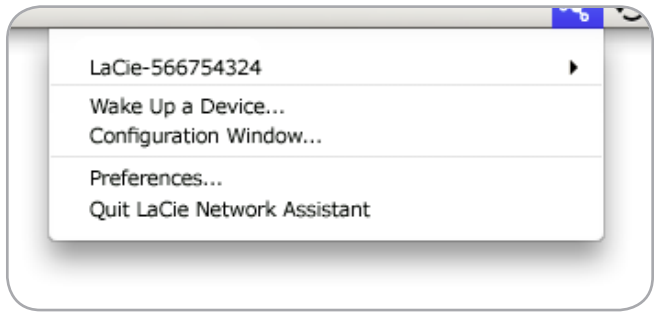


Fig. 16

TECHNICAL NOTE: If you have just turned on the LaCie Ethernet Disk, it may take a few minutes for the server to show up in the network.

6.1.1. Other Connection Methods

Vista/XP/2000 Users – My Network Places

IMPORTANT INFO: If you have just turned on the LaCie Ethernet Disk, it may take a few moments for it to appear on the network.

To access the share in Windows, look in My Network Places, and select **Microsoft Windows Workgroup**. By default, the Ethernet Disk will be named **LaCie-XXXXXXXXX** (*Fig. 17*).

Alternatively, you can access the share by typing the following in a Windows explorer address field (*Fig. 18*):

\\LaCie-XXXXXXXXX\[share name]

\\[Ethernet Disk IP address]\[share name] Find the IP address by running the LaCie Network Assistant (section *5.1. Connecting Using LaCie Network Assistant*).

For FTP access, type:
ftp://LaCie-XXXXXXXXX or ftp://[Ethernet Disk IP address]

In the logon window that opens, type:
Login: **administrator**
Password: **admin**
(This user name and password is the factory default; if you have already created a user, input your user name and password.)

The LaCie Ethernet Disk will appear as a drive with one share folder on the network.

Windows Me/2000

For Windows Me and Windows 2000 users, if you cannot find the LaCie Ethernet Disk from your workstation, try using the Windows search tool.

From the Start menu, select **Search**, and then click on **For Files or Folders**. In the **Search Results** window, select **Computers**.

In the **Search for Computers** dialog box, enter the server name and click the **Search Now** button. By default, the LaCie Ethernet Disk will be named "LaCie-XXXXXXXXX" , and the share "public".

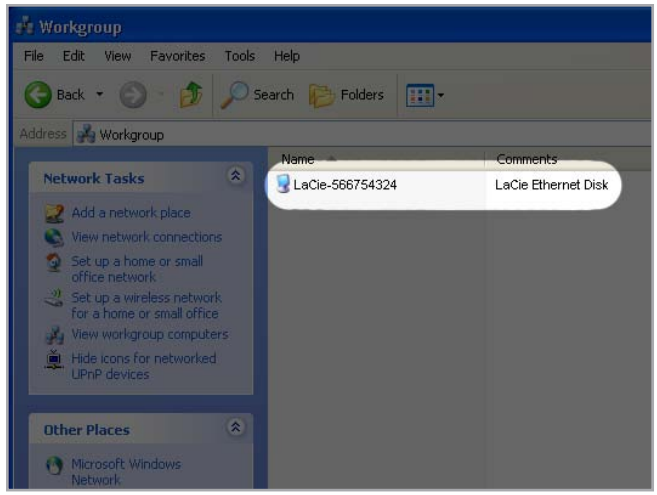


Fig. 17

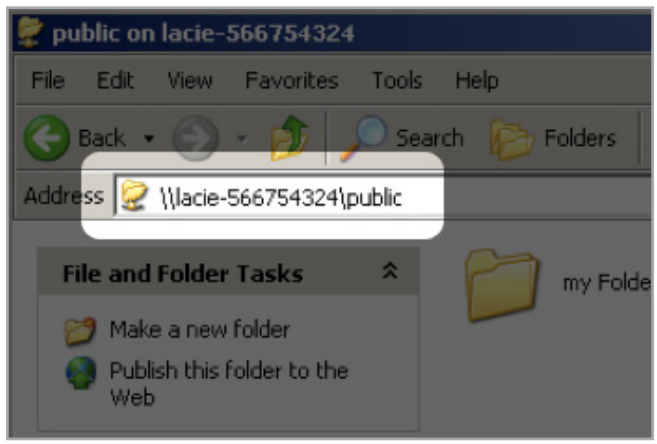


Fig. 18

Mac OS 9.x Users

From the Apple menu, select **Network Browser**, **Chooser** or **Connect to Server**. In Chooser, click the **Appleshare** icon. Your server should appear in the list with the default name "LaCie-XXXXXXXXX". Select it and press **OK**.

Linux Users

Under KDE, open konqueror and type in the IP address of the LaCie Ethernet Disk into the address field:

For FTP access – ftp://[Ethernet Disk IP address]

For HTTP access – http://[Ethernet Disk IP address]

For SMB/CIFS access (in order for this to method to work, the services need to be properly configured) – smb://[Ethernet Disk IP address].

6.2. Connecting Via HTTP or FTP

If you have enabled HTTP share, you can access your share directly from any computer with a current browser. Just open a browser to http://[Ethernet Disk IP address] (the "Ethernet_Disk_IP_address" stands for the IP address assigned to your LaCie Ethernet Disk by the LaCie Network Assistant).

Once the page has loaded, you can choose how you want to connect to the LaCie Ethernet Disk. Click the HTTP button to access in http mode, or FTP to access in the ftp mode.

You can also connect directly to the FTP share by opening a browser at ftp://[Ethernet Disk IP address]/[sharename].

6.3. Connecting with an FTP Client

You can use any FTP client to connect to the LaCie Ethernet Disk. Clients like LeechFTP (*Fig. 19*), CuteFTP, etc., will work normally.

You can also use the command line command, "ftp":

1. Type: ftp [Ethernet Disk IP address]
2. Enter your username and password.
3. Type: cd /sharename

TECHNICAL NOTE: If you are operating under Windows or are using Internet Explorer to connect via FTP, you can drag and drop objects to upload files if the share is write enabled.

TECHNICAL NOTE: The ftp command line exists under most Windows versions, and on most UNIX operating systems.

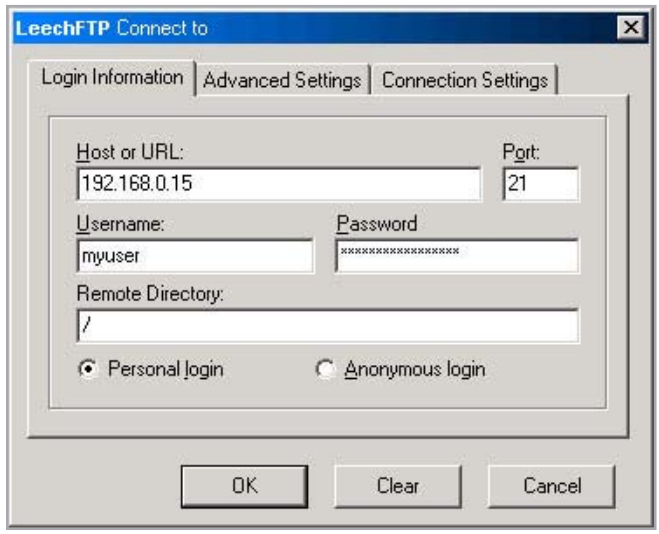


Fig. 19

7. Using the Web Administration Page

LaCie provides a Web Administration Page with utilities that allow the LaCie Ethernet Disk administrator to easily create and customize shares, add and modify users and groups, and assign user permissions.

7.1. Accessing the Web Administration Page

To access the Web Administration Page:

Open your browser to http://[Ethernet Disk IP address] ("Ethernet Disk IP address" stands for the IP address assigned to your LaCie Ethernet Disk by the LaCie Network Assistant).

You should see a Web page showing the available shares on your LaCie Ethernet Disk.

To enter the Web Administration Page,

1. Click in the upper left-hand corner designated "**Administration**." You will be prompted to enter a user name and a password (*Fig. 20*).
2. Enter:

   Login: administrator
   Password: admin

You will then be in the Web Administration Page.

IMPORTANT INFO: It is recommended that you use Internet Explorer 5.0 or higher as your browser.

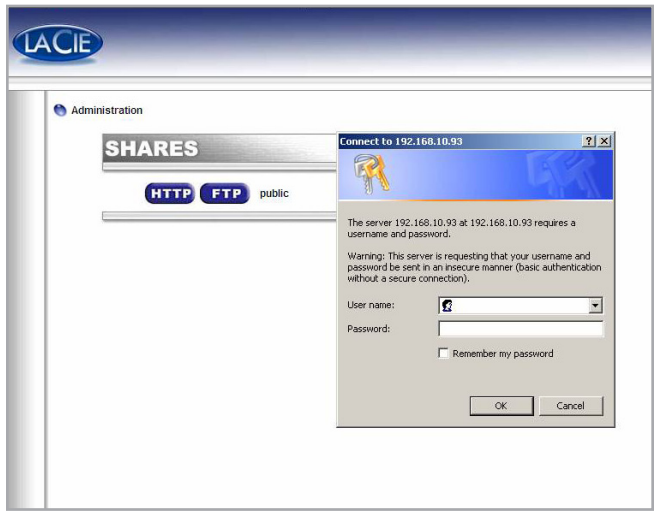


Fig. 20

7.2. Wizard Mode and Advanced Mode

There are two different ways to use the Web Administration Page, Wizard mode or Advanced mode (*Fig. 21*).

Wizard Mode

This method is recommended for beginning administrators, or for those who have a limited technical knowledge base.

The Wizard mode provides an easy way to create new shares and users. This mode will guide you through a series of questions and will help you to create your shares and users.

Click the **Wizard Mode** button to use this utility.

Advanced Mode

The Advanced mode provides you with all of the available tools: you can create, delete and customize any share and user. You can also change the system configuration (machine name, time, etc.) and defrag or back up drives.

Click the **Advanced Mode** button to utilize these tools.

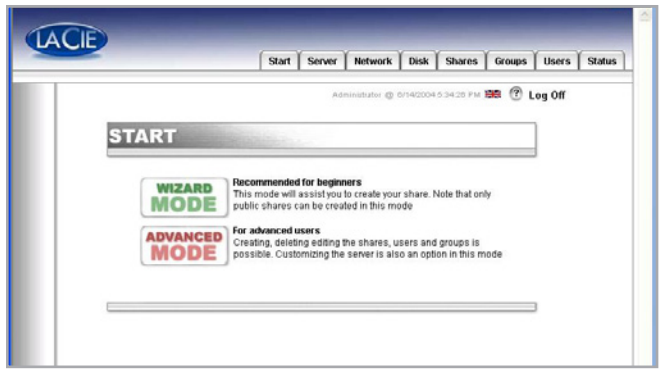


Fig. 21

Fig. 22

7.3. Using the Wizard Mode

7.3.1. Creating a Share: "Share Name"

Enter the name of the share you want to add and press the **Next** button (*Fig. 22*). The name must only contain valid characters (do not use any of the following:

? [ ] \ / = + < > ; : " , | *).

TECHNICAL NOTE: If you will be using your LaCie Ethernet Disk with Mac OS 9.x, the file and folder length is limited to 27 characters. If you will be using your LaCie Ethernet Disk in a network environment with Mac OS 9.x and Mac OS 10.x or Windows, the same limitation applies. In network environments that utilize Windows and/or Mac OS 10.x, files and folders may be up to 255 characters.

7.3.2. Username

The share that you are about to create is public – this means that anyone who has an account on the LaCie Ethernet Disk will be able to access it. To limit access, you have to create users. If you already have user accounts, you may skip this step and click on the **Next** button (*Fig. 23*). If you want to add a user, please fill in the input boxes and then press **Next.**

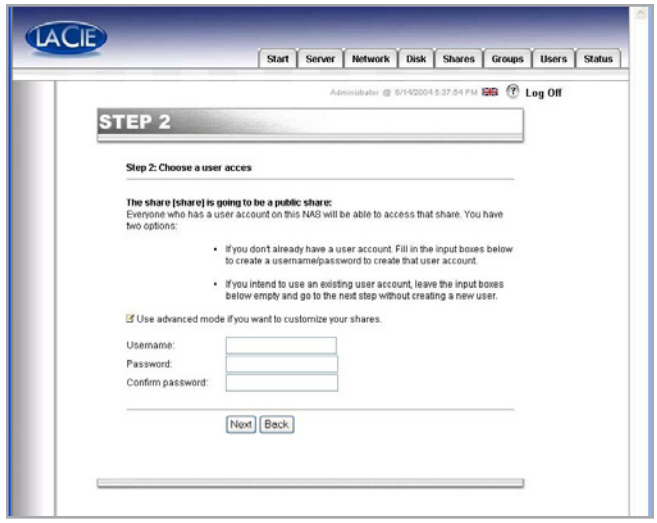

LACIE
Start
Server
Network
Disk
Shares
Groups
Users
Status
Log Off
STEP 2
Step 2: Choose a user acces
The share [share] is going to be a public share:
Everyone who has a user account on this NAS will be able to access that share. You have two options:
If you don't already have a user account. Fill in the input boxes below to create a username/password to create that user account.
If you intend to use an existing user account, leave the input boxes below empty and go to the next step without creating a new user.
Use advanced mode if you want to customize your shares.
Username:
Password:
Confirm password:
Next
Back

Fig. 23

7.3.3. Confirmation

This step gives you a summary of the actions that are going to be performed by the Wizard. Use the **Back** button to go to the previous screens and to change the settings. Once all settings are how you would like them, press the **Next** button (*Fig. 24*).

Fig. 24

7.3.4. Set-up Complete

Once the Wizard has successfully completed the above steps, you will see this page (*Fig. 25*). Click **Exit** to go back to the main page.

IMPORTANT INFO: The share and/or user will not be created until the last step of the Wizard. You need to complete all the steps of the Wizard to create the share/user correctly. During the process, you can use the **Next** and **Back** buttons to make changes to your settings.

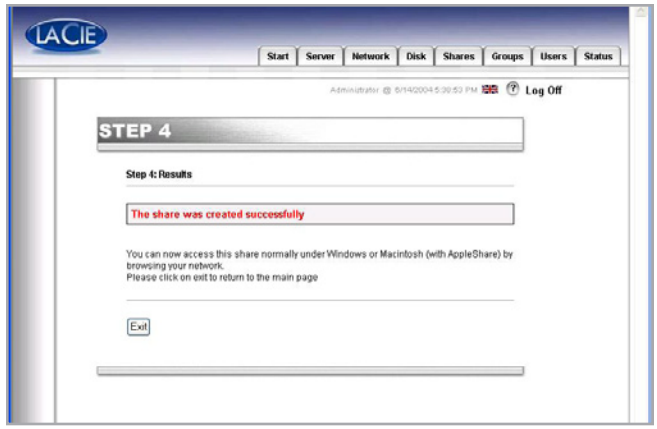


Fig. 25

7.4. Using the Advanced Mode

7.4.1. Changing the Name and Location of the LaCie Ethernet Disk

Changing the Name

The server name is the one that is used to identify your LaCie Ethernet Disk on the network. By default, it is set as LACIE-XXXXXXXXX.

To change the name of your LaCie Ethernet Disk, from the Web Administration Page, go to the Server section and click on the **Edit** button to the right of the machine name (*Fig. 26*). You can then change the name through this page. Keep in mind you will need to reboot the LaCie Ethernet Disk for your changes to take effect.

TECHNICAL NOTE: The default name for the LaCie Ethernet Disk will always be LACIE- followed by 9 random characters (letters and numbers). This manual will refer to this default name as LACIE-XXXXXXXXX.

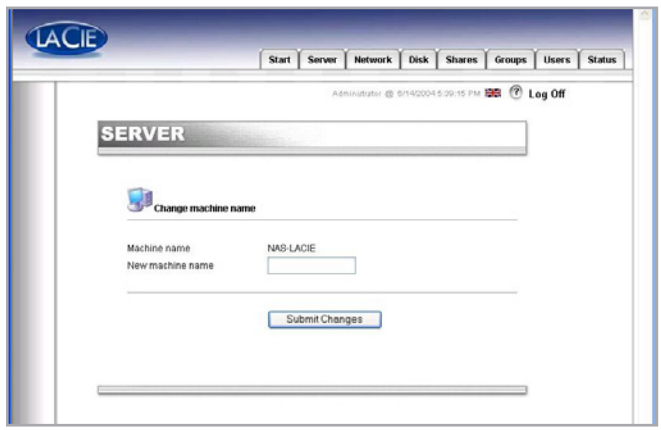


Fig. 26

Moving From A Workgroup To A Domain

Windows Users: You can choose whether or not your LaCie Ethernet Disk should belong to a Workgroup or a Domain (*Fig. 27*). By default, your LaCie Ethernet Disk will belong to the workgroup named WORKGROUP. You can also set your LaCie Ethernet Disk into a Windows domain. An administrator domain user name and password will be required, though. Please ask your system administrator for more information.

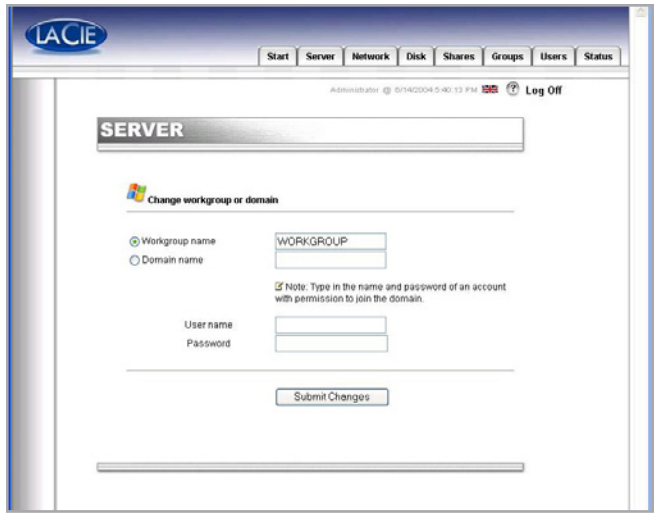


Fig. 27

7.4.2. Setting the Date and Time

You can set the date and time of your LaCie Ethernet Disk in the Web Administration Page, under the Server section (*Fig. 28*). Click on the button next to the current time, which brings you to the Edit system time page. Set the date and time, and then press the **Set time and date button**.

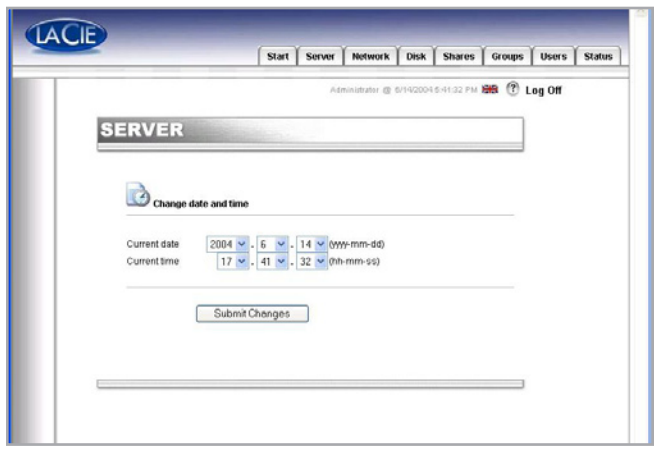


Fig. 28

7.4.3. Sharing Your LaCie Ethernet Disk in Advanced Mode

Your LaCie Ethernet Disk works like a typical file sharing system: you create users and/or groups that have access to use and share data, then create a share and assign the users and/or groups rights to that share.

Creating Users

Click on the Users tab and press the **Add a user** icon (*Fig. 29*). Enter the username* and all the necessary information in the text fields, then press the **Add new user** button.

*Username must be unique and contain at least 4 characters. Do not use any of the following characters:

? [ ] \ / = + < > ; : " , | *

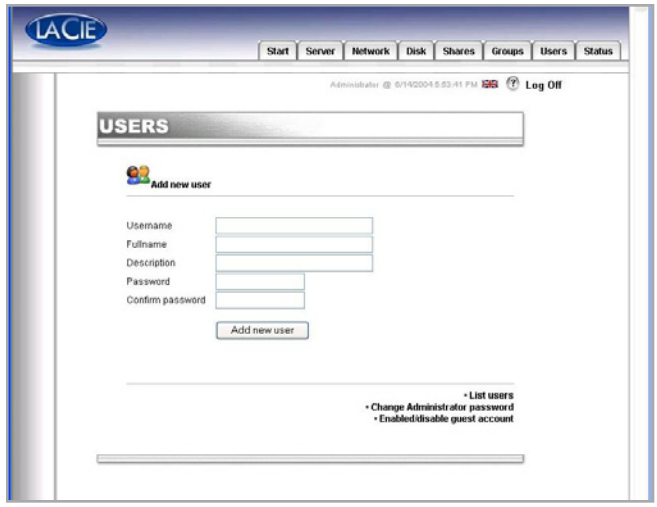


Fig. 29

Creating Groups

Click on the Groups tab and press the **Add a group** icon (*Fig. 30*). Enter a group name* and a description for the group in the text fields and press the **Add group button**.

*The group name must be unique and contain at least 4 characters. Do not use any of the following characters:

? [ ] \ / = + < > ; : " , | *

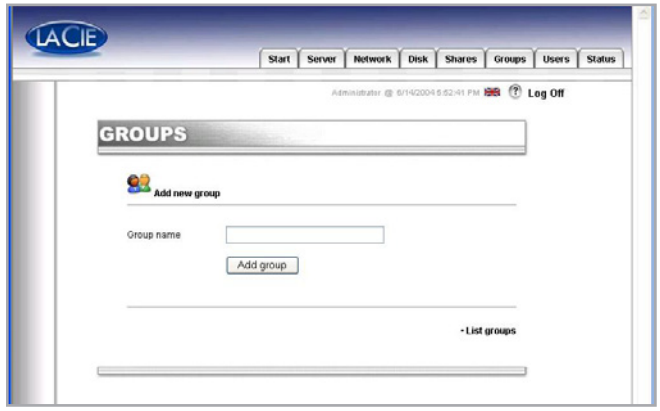


Fig. 30

Creating Shares

Click on the Shares tab and press the **Add a share** icon (*Fig. 31*). Enter a share name* and select a drive or partition for the share, and then press the **Submit Changes** button.

*The share name must be unique and contain at least 4 characters. Do not use any of the following characters:

? [ ] \ / = + < > ; : " , | *

TECHNICAL NOTE: If you will be using your LaCie Ethernet Disk with Mac OS 9.x, the file and folder length is limited to 27 characters. If you will be using your LaCie Ethernet Disk in a network environment with Mac OS 9.x and Mac OS 10.x or Windows, the same limitation applies. In network environments that utilize Windows and/or Mac OS 10.x, files and folders may be up to 255 characters.

Once the share is created, you must edit it in order to allow people to access it. Click on **List Shares** and all of the shares of that have been created will appear (*Fig. 32*). Click on a share name to edit the share properties.

There are four types of shares:

Windows (CIFS/SMB)

This share is compatible with Microsoft Windows networks. Enable this type of share if you want to share your data under Windows (95, 98, Me, NT, 2000 and XP).

Apple (Appleshare)

This share is compatible with Mac OS systems. Enable this type of share if you want to share your data under Mac OS 9.x and 10.x.

HTTP

This share is compatible with all systems that have a Web browser (Internet Explorer, Netscape Navigator, Opera, Lynx, etc.). This share type is compatible with nearly all modern systems, but is suitable for read-only data operations. Enable this type of share if you want maximum compatibility over your network, and if you can share your data as read only.

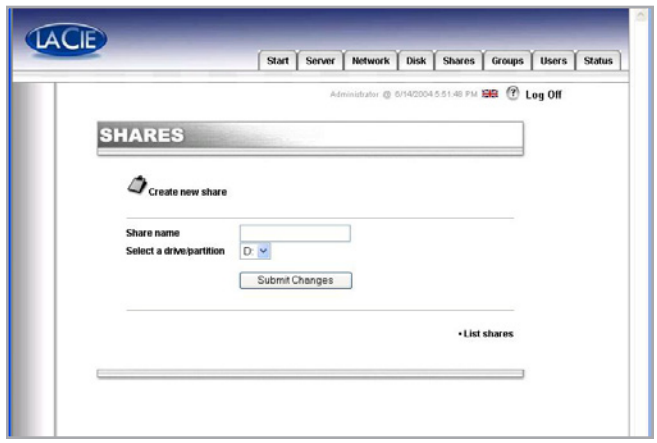


Fig. 31

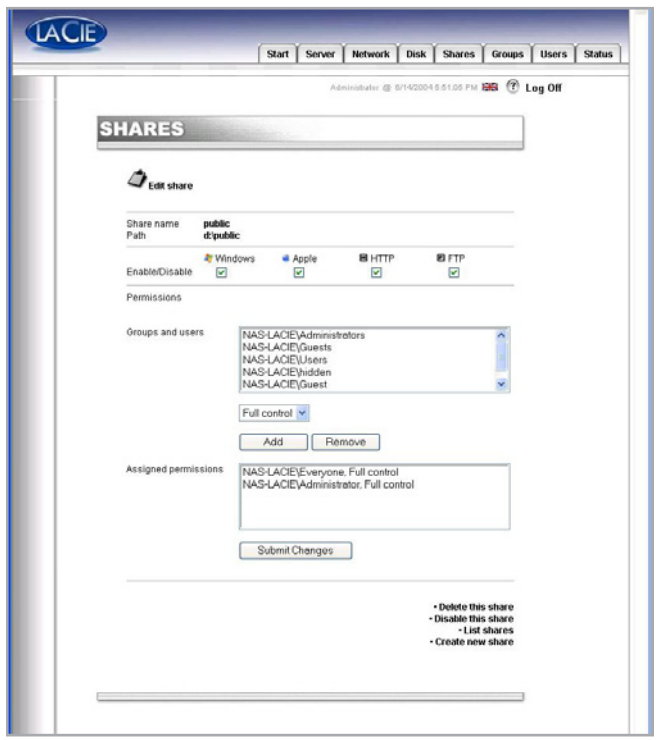


Fig. 32

FTP

This share is compatible with all systems that have an FTP client. Most systems include such a tool. Enable this type of share for maximum compatibility over the network.

IMPORTANT INFO: When you create a share, the Windows (CIFS/SMB) sharing is activated by default.

In the current version of the LaCie Ethernet Disk (version 1.2 and later), you can set share permissions under Windows and the Mac OS. Use the arrow buttons to add or remove permissions. Under Apple, if enabled, the share will be accessible for any authenticated user. Under HTTP and FTP, the share will be public in either or both read and write access, whether or not you checked the read and/or write checkboxes.

7.5. Shutting Down the Ethernet Disk

The recommended method to turn off the Ethernet Drive is to use the Web Administration tool (*Fig. 33*). Two other methods using the Power button are described in section *2.4. Rear Panel*.

1. Click on the Server tab.
2. Click on the **Shutdown** button (located near the bottom of the page).

Fig. 33

8. Advanced Management of Users, Groups and Shares

8.1. Listing Local Users

A user is any individual with a valid username and password who, once authenticated, has access to those shares on the LaCie Ethernet Disk to which (s)he is allowed.

In the Web Administration Page, click on Users to have access to the list of the local users on your LaCie Ethernet Disk (*Fig. 34*).

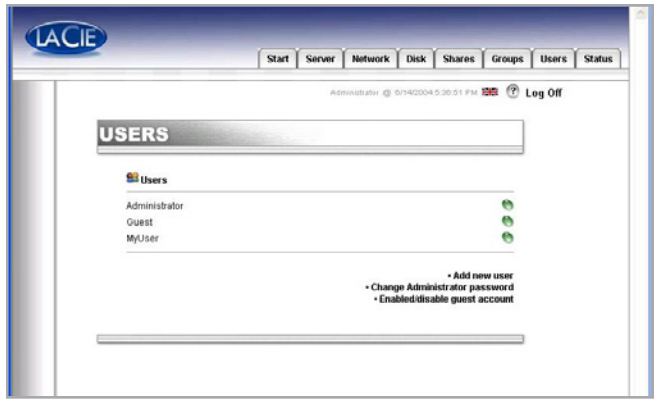


Fig. 34

8.1.1. Creating a User

In the Web Administration Page, click on the Users tab. From the lower-right corner of the page, click on **Add a user** to create a new user (please refer to *7.4. Using the Advanced Mode* for more information):

1. Enter the new username. It must be unique to the local machine.
2. Enter a description.
3. Enter a password and confirm it.
4. Press the **Create the user** button.
5. Your new user has been created, and by default, it will belong to the Users group.

8.1.2. Editing a User

1. From the list of local users, click on the button next to the username that you wish to edit.
2. Edit the username, password and description as you like.
3. Assign groups to the user.
4. Submit the changes.

8.1.3. Deleting a User

Edit the user, then, from the bottom of the page, click on the **Delete** button.

IMPORTANT INFO: By default, a user belongs to the Users group. If you want a user to become an administrator, add that user to the Administrators group.

8.2. Listing Local Groups

A group is a collection of users with the same access rights. Putting users in the same group allows you to collectively manage them, thus more quickly and easily.

In the Web Administration Page, click on the Groups tab to have access to the list of local groups on your LaCie Ethernet Disk (*Fig. 35*).

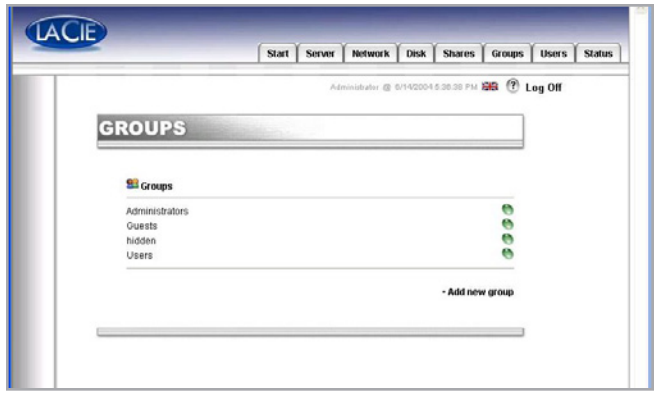


Fig. 35

8.2.1. Creating a Group

In the Web Administration Page, click on the Groups tab. From the lower-right corner of the page, click on **Add a group** to create a group (please refer to *7.4.3. Sharing Your LaCie Ethernet Disk in Advanced Mode* for more information).

1. Enter the new group name. It must be unique to the local machine.
2. Leave the domain group blank, or fill it in if you want to create a domain group (you will need to have access rights to the domain if you create it as such. Ask your system administrator for more information). For default settings, leave it blank.
3. Enter a description.
4. Press the **Create the group** button.
5. Your group is now created, and by default, it belongs to the Users group.

8.2.2. Editing a Group

1. From the list of local groups, click on the button next to the group name that you wish to edit.
2. Change the description as desired.
3. Submit the changes.

8.2.3. Deleting a Group

Edit the group, then, from the bottom of the page, click the **Delete** button.

IMPORTANT INFO: There are a few fixed groups on the LaCie Ethernet Disk, and they can not be deleted. They are: Administrators, Guests, Power Users and Users.

8.3. Listing Local Shares

A share is a folder on which designated groups and/or users can be granted access to create, modify, read, and delete files.

From the Web Administration Page, click on the Shares tab to list the local shares on your LaCie Ethernet Disk (*Fig. 36*).

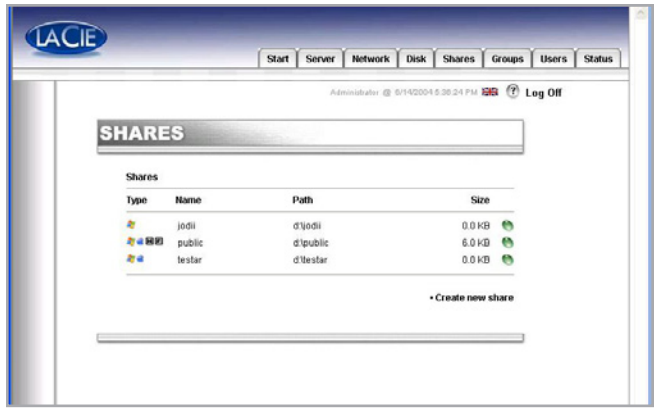


Fig. 36

8.3.1. Creating a Share

From the Web Administration Page, click on the Shares tab. From the lower-right corner of the page, click on **Add a share** to create a share (please refer to *7.4.3. Sharing Your LaCie Ethernet Disk in Advanced Mode* for more information).

8.3.2. Editing a Share

From the list of local groups, click on the button next to the share name to edit that share. Refer to *7.4.3. Sharing Your LaCie Ethernet Disk in Advanced Mode* for more information.

8.3.3. Deleting a Share

Edit the share, then, from the bottom of the page, click the **Delete** button.

8.3.4. Deleting a Broken Share

When you create shares on a removable drive and disconnect that drive, you create what are called "broken shares." These shares will still be in the share database, but will not be physically present. If you connect your removable drive again, they will not work.

The LaCie Ethernet Disk program allows you to remove the broken shares from the database. At the bottom of the Shares page, there will be a list of broken shares, if you have any. Click on the **Delete** button for the share(s) you want to remove.

TECHNICAL NOTE: When you have multiple drives in your LaCie Ethernet Disk, or when you connect a mass storage device to your LaCie Ethernet Disk, you will be able to choose the drive in which you want to create the share. The drives will be named as they typically are under Windows, i.e. D: (first data drive), E: (second data drive), etc..

9. Managing Your LaCie Ethernet Disk

9.1. Checking Your Server Configuration

From the Web Administration Page, click on the Server tab to find out the configuration of your LaCie Ethernet Disk (*Fig. 37*).

You should see:

- Machine name
- Windows domain or workgroup
- Appletalk zone
- NAS software configuration
- Operating system
- BIOS version
- Manufacturer and model
- Processor
- Number of processors
- Physical memory
- Virtual memory

From this page, you can also reboot and shutdown the server.

Fig. 37

9.2. Changing the Administrator's Password

By default, the administrator's password is **admin**. You should change this password as soon as possible, for security reasons.

1. In the Web Administration Page, click on the Users tab.
2. Click on **Change Administrator Password** button (*Fig. 38*).
3. Enter your new password and confirm it.
4. Press **Submit changes**.

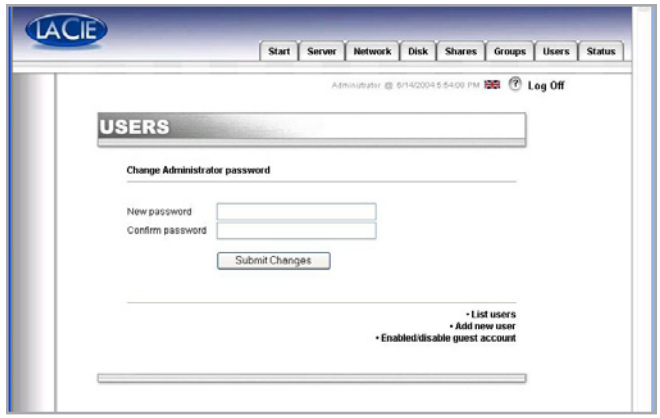


Fig. 38

9.3. Enabling/Disabling Guest Accounts

Enabling guest accounts allows people to connect to shares without authenticating (*Fig. 39*). However, there are some limitations. For instance, under Windows, you will not be allowed to connect to protected shares unless you map the share as a drive, and there are also security issues. Some problems may also occur under the Mac OS, as well. Therefore, it is recommended that you not enable guest accounts unless you have a high-level of technical expertise and know exactly what you are doing.

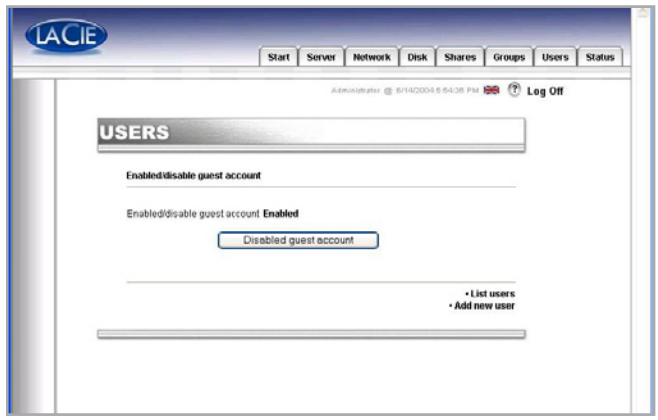


Fig. 39

9.4. Rebooting Your Server

1. In the Web Administration Page, click on the Server tab.
2. At the bottom of the page, click on the **Reboot** button (*Fig. 40*).
3. The server will start to reboot. It will take a little time before it reboots.

9.5. Shutting Down Your Server

1. In the Web Administration Page, click on the Server tab.
2. At the bottom of the page, click on the **Shut Down** button (*Fig. 40*).
3. The server will shut down shortly after.

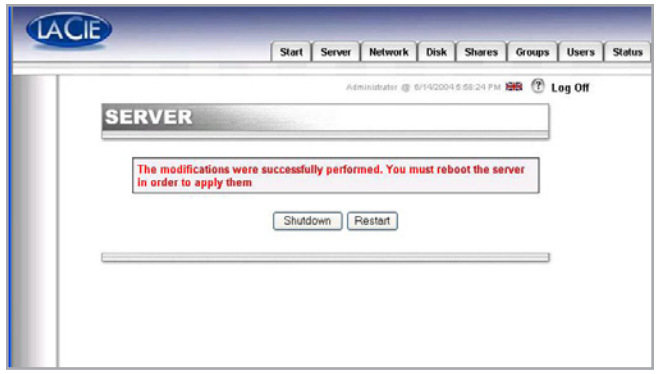


Fig. 40

9.6. Changing Your Network Configuration

You can change the network configuration from the Web Administration Page. It is similar to the Network Assistant program (on the provided CD).

1. In the Web Administration Page, click on the Network tab.
2. Enter the parameters for the network, and submit the changes (*Fig. 41*). For your LaCie Ethernet Disk, only the IP address and subnet mask need to be double-checked prior to making changes. Other values are optional. Ask your system administrator for more details.
3. The Reboot your machine page will appear.
4. Reboot the machine.

CAUTION: If you change the subnet mask, LaCie recommends that you use the Network Assistant Program (from the provided CD). If you change the subnet mask from the Web Administration Page, you will not get the Reboot your machine page, because your LaCie Ethernet Disk will have changed to another subnet and it will appear as though you cannot access the LaCie Ethernet Disk. You will then need to use a machine on the same subnet to access the Web Administration Page of your LaCie Ethernet Disk.

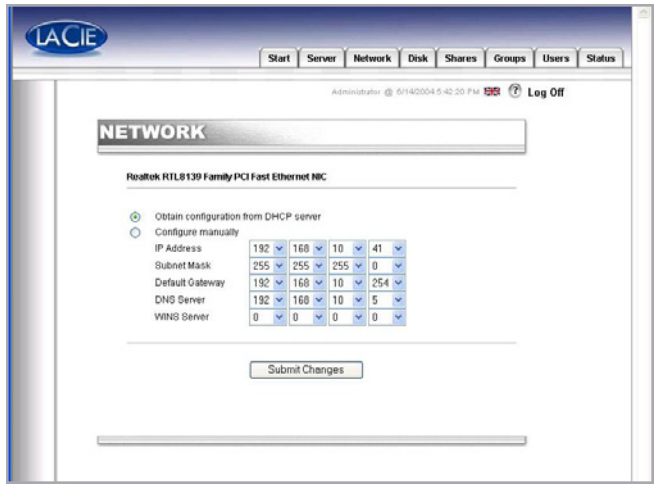


Fig. 41

9.7. Formatting Disks

The LaCie Ethernet Disk allows you to format a disk. To format a disk, use the formatting tool:

1. In the Web Administration Page, click on the **Disk** tab.
2. Check format for the drive that you want to format (*Fig. 42*). (There should only be one drive, unless you have attached an external hard disk drive to your LaCie Ethernet Disk.)
3. Answer the following questions, then click on the **Format** button (*Fig. 43*). Leave the status window open until the formatting process completes.

The formatting process can be a quick process, or a long process, depending on the size of your hard drive. If necessary, you can stop the formatting process at any time – it is not recommended, however, because you may corrupt files or cause other errors.

IMPORTANT INFO: Before beginning the formatting process, all files must be unlocked (i.e., the files cannot be in use). It is recommended that you format the drive immediately after a reboot to ensure that no one is accessing shares during the formatting process.

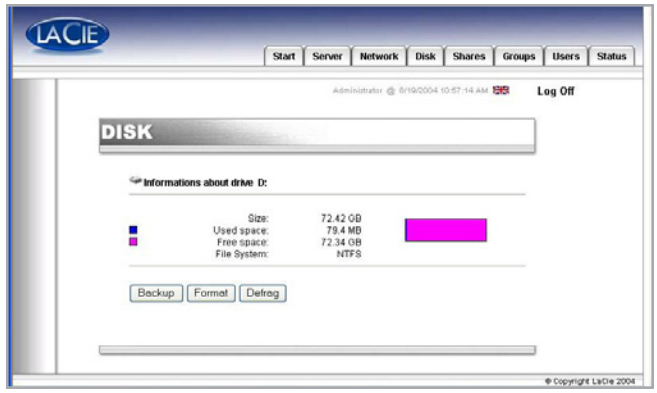


Fig. 42

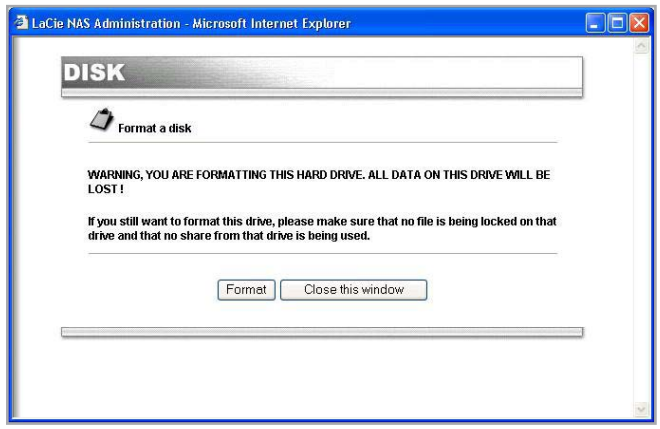

LaCie NAS Administration - Microsoft Internet Explorer
DISK
Format a disk
WARNING, YOU ARE FORMATTING THIS HARD DRIVE. ALL DATA ON THIS DRIVE WILL BE LOST !
If you still want to format this drive, please make sure that no file is being locked on that drive and that no share from that drive is being used.
Format
Close this window

Fig. 43

9.8. Defragmenting Disks

When a disk is too fragmented it causes the disk to slow down. You can defragment a disk using the defragment tool provided with your LaCie Ethernet Disk.

1. In the Web Administration Page, click on the Disk tab.
2. Check defragment for the drive that you want to defragment (*Fig. 44*). There should only be one drive, unless you have attached an external hard disk drive to your LaCie Ethernet Disk.
3. Answer the following questions, then click on the **Defragment** button (*Fig. 45*). Leave the status window open until the defragmentation process is completed.

The defragmentation process can be a quick process, or a long process, depending on the size of your hard drive. If necessary, you can stop the defragmentation process at any time – it is not recommended, though, because you may corrupt files or cause other errors.

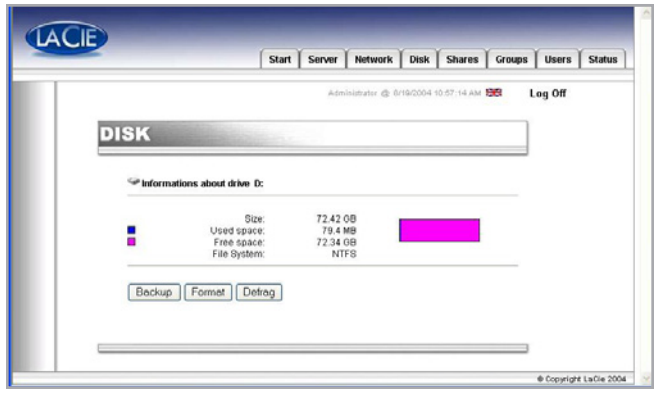


Fig. 44

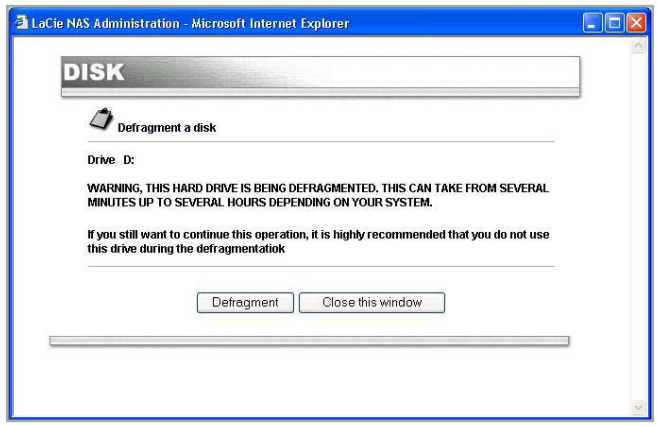

LaCie NAS Administration - Microsoft Internet Explorer
DISK
Defragment a disk
Drive D:
WARNING, THIS HARD DRIVE IS BEING DEFRAGMENTED. THIS CAN TAKE FROM SEVERAL MINUTES UP TO SEVERAL HOURS DEPENDING ON YOUR SYSTEM.
If you still want to continue this operation, it is highly recommended that you do not use this drive during the defragmentatiok
Defragment
Close this window

Fig. 45

9.9. Backing Up LaCie Ethernet Disk Using the Built-In Backup Engine

The LaCie Ethernet Disk uses Microsoft's NT Backup to perform a backup of one, many, or all directories of your drive, and can be scheduled to run every day, week or month at a predetermined time. The Backup utility helps you protect data from accidental loss if your system experiences hardware or hard disk failure. For example, you can use the Backup utility to create a duplicate copy of the data on your hard disk. If the original data on your hard disk is accidentally erased or overwritten, or becomes inaccessible because of a hard disk malfunction, you can easily restore the data from the archived copy.

9.9.1. Backing Up With the Built-In Backup Engine

IMPORTANT INFO: This backup program is only available if your LaCie Ethernet Disk has a direct attached hard drive. For information on backing up the Ethernet Disk onto another NAS (network-attached storage) device, refer to section *11.4. Back Up the LaCie Ethernet Disk onto other NAS Devices*.

The backup file will be saved under the destination drive (\nas. backup\backup.bkf) file.

1. In the Web Administration Page, click on the Disk tab.
2. Check **Backup** for the drive that you want to backup (*Fig. 46*).
3. Choose the drive that you want to backup to in section 1. Source and destination.
4. Choose the directories that you want to backup in section 2. Directories to backup. Hold down the CTRL key if you want to choose specific, multiple directories, or choose to backup all the directories.
5. Choose from the pull-down menu the type of backup to execute in section 3. Select the type of backup. The options are Normal, Incremental and Differential.
6. Choose a schedule for your backup. You can choose between a daily, weekly or monthly backup at a specified time. You can also choose to backup right now.

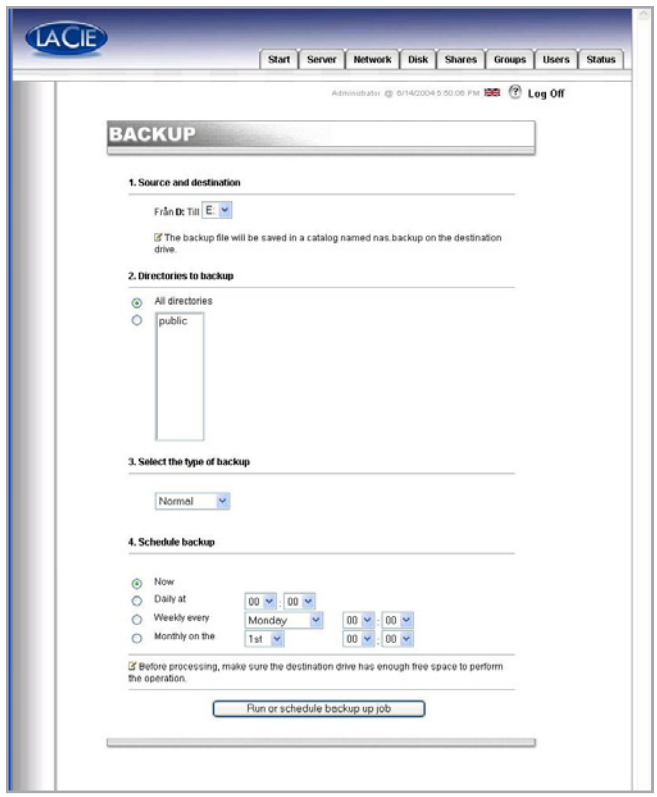


Fig. 46

7. Press the **Run or schedule backup job** button to start the backup process.

You can stop the backup process while it is running by clicking the Stop the running backup button.

To view the scheduled backup jobs, click on the Server tab. To remove a scheduled backup, press the **Delete** button for the scheduled job.

9.9.2. Recovering Files Using The Built-In Backup Engine

TECHNICAL NOTE: You can use Backup to back up and restore data on either file allocation table (FAT) or NTFS file system volumes. However, if you have backed up data from an NTFS volume, it is recommended that you restore the data to an NTFS volume. If you do not, you could lose data as well as some file and folder features such as permissions.

1. Connect locally to the Ethernet Disk using keyboard, mice and monitor. You can also connect using the Remote Desktop Connection Client.
2. Double-click on the **NT Backup** icon on the desktop (*Fig. 47*).
3. Click the **Next** button.
4. Select **Restore files and settings** and click the **Next** button (*Fig. 48*).

TECHNICAL NOTE: Backup time is dependent upon the speed of the drive that you are using, the port that you are using (internal drives are limited to 133Mb/s, Hi-Speed USB 2.0 is limited to 480Mb/s) and the amount of the data that you are backing up.

Backup or Restore Wizard
Welcome to the Backup or Restore Wizard
This wizard helps you back up or restore the files and settings on your computer.
If you prefer, you can switch to Advanced Mode to change the settings used for backup or restore. This option is recommended for advanced users only.
Always start in wizard mode
To continue, click Next.
< Back
Next >
Cancel

Fig. 47

Backup or Restore Wizard
Backup or Restore
You can back up files and settings, or restore them from a previous backup.
What do you want to do?
Back up files and settings
Restore files and settings
< Back
Next >
Cancel

Fig. 48

5. Select the file(s) or folder(s) you want to restore (*Fig. 49*).

6. Click the **Next** button.

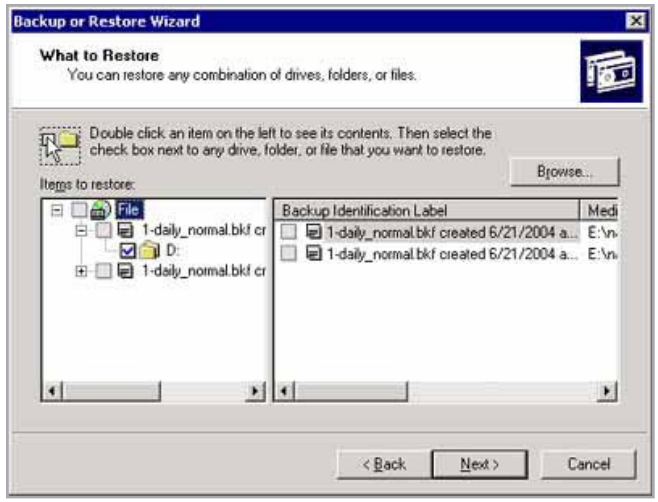

Backup or Restore Wizard
What to Restore
You can restore any combination of drives, folders, or files.
Double click an item on the left to see its contents. Then select the check box next to any drive, folder, or file that you want to restore.
Browse...
Items to restore:
File
1-daily_normal.bkf cr
D:
1-daily_normal.bkf cr
Backup Identification Label
Medi
1-daily_normal.bkf created 6/21/2004 a...
E:\n
1-daily_normal.bkf created 6/21/2004 a...
E:\n
< Back
Next >
Cancel

Fig. 49

7. Click the **Finish** button (*Fig. 50*).

8. The restore progress dialog will appear.

When then restore is complete click the **Close** button.

TECHNICAL NOTE: Clicking on the Advanced... button will allow you to specify additional restore options. (i.e. Alternate location or Single folder).

Backup or Restore Wizard
Completing the Backup or Restore Wizard
You have created the following restore settings:
Restore from: 1-daily_normal.bkf created 6/21/2004 at
Type: File
Restore to: Original locations
Existing files: Do not replace
To close this wizard and start the restore, click Finish.
To specify additional restore options, click Advanced.
Advanced...
< Back
Finish
Cancel

Fig. 50

9.10. Backing Up Disks Using Third-party Software Programs

The LaCie Ethernet Disk is compatible with third party backup programs, such as Retrospect, ArcServeIT, NT Backup, etc., and you can utilize these programs to backup your LaCie Ethernet Disk over the network to a Tape Drive.

Since your LaCie Ethernet Disk can be seen on the local area network (LAN), and because you can map the shares, you can backup all the data on your LaCie Ethernet Disk over the network, using the program of your choice.

9.11. Uploading a New Version of the System Software

CAUTION: Ensure that you are only uploading a newer, valid version of system software.

1. From LaCie's Web site (www.lacie.com), download the latest version of the system software.
2. In the Web Administration Page, click on the Server tab. At the NAS Software version line, click on the button to the right of the version number.
3. This will bring you to the Update the system page (*Fig. 51*).
4. Browse for the file that you just downloaded from LaCie's site.
5. Press the **Upload file** button.
6. Reboot your machine.

Once the server has rebooted, go to the Server page again, and check the version of the NAS software. It should now be updated to the latest version.

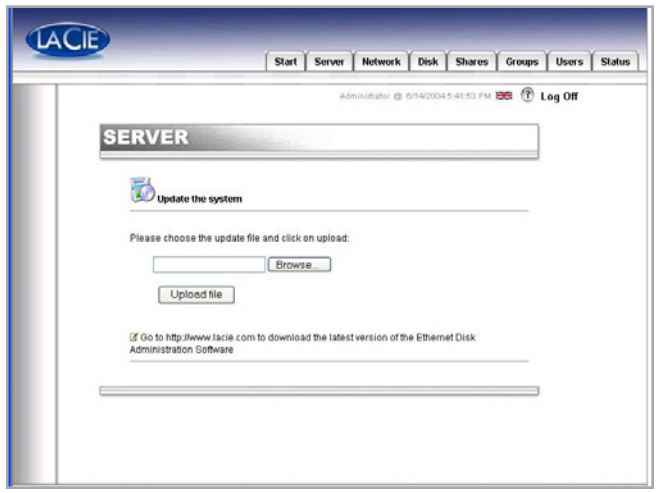


Fig. 51

9.12. Restoring Your LaCie Ethernet Disk

CAUTION: This is an emergency procedure only! Do not attempt to restore your LaCie Ethernet Disk if your system is functioning properly.

If you want to restore your system to its initial version, open a browser to http://server_ip/nas.restore (the server_ip_address stands for the IP address assigned to your LaCie Ethernet Disk by the LaCie Network Assistant)

Login with the Administrator account and click the Restore button for the restore point that you would like use to rollback your system (*Fig. 52*). Your LaCie Ethernet Disk's system will be restored.

Shutdown your system by pressing the power button once. The system will be restored during the shutdown process.

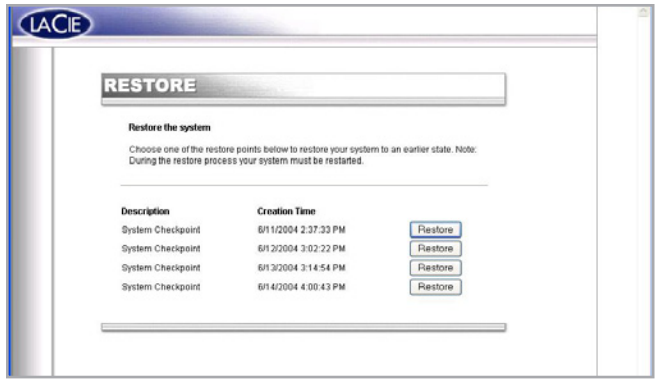


Fig. 52

10. Adding Additional Storage Space

You can add additional storage space to your LaCie Ethernet Disk by connecting an external hard drive using a Hi-Speed USB 2.0 port.

1. Connect the hard drive to the LaCie Ethernet Disk using one of the Hi-Speed USB 2.0 ports.
2. In the Web Administration Page, click on the **Disk** tab (*Fig. 53*).
3. Refresh the page if necessary (under Windows in either Internet Explorer or Netscape Navigator, right-click in the frame and click on Refresh or Reload).
4. A second drive should then be listed, and you can now create shares on these drives (*Fig. 54*).

IMPORTANT INFO: Only NTFS formatted disks are fully supported. Disks formatted in FAT32 can only be used for backup. Any other format is not supported.

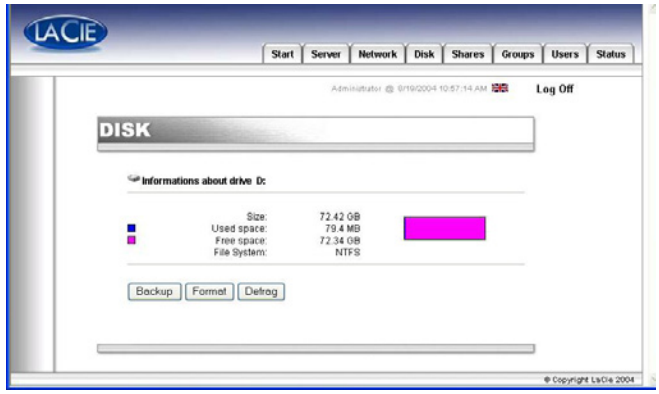


Fig. 53

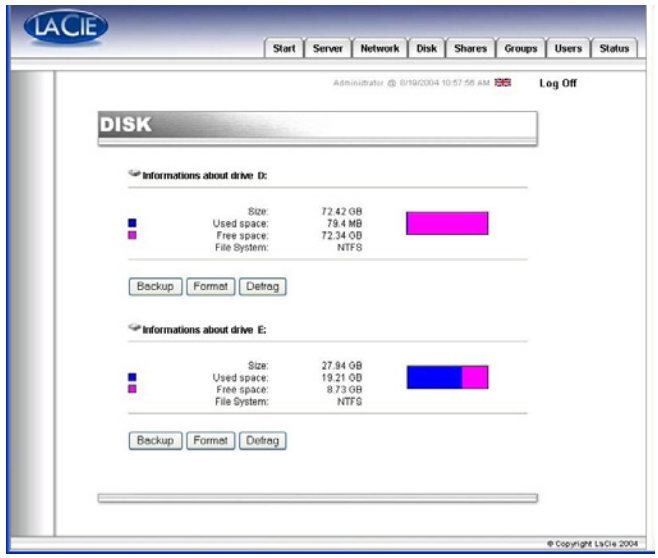


Fig. 54

11. Using the LaCie Shell

The LaCie Shell provides you with a simplified interface to the major functions of the Ethernet Disk.

Remote Desktop (for Windows and Macintosh) allows you to access the LaCie Shell from your computer without having to connect a monitor, keyboard, or mouse directly to the Ethernet Disk. Remote Desktop is based on Microsoft's Terminal Services technology and uses the Remote Desktop Protocol (RDP) to allow a client to connect to a remote host. Under RDP, which works across a TCP/IP connection, the client system is allowed to send keyboard and mouse input to the remote host to run applications located on the host system. The host system then uses RDP to send screen and audio information back to the client system. The LaCie Ethernet Disk system does not have any sound card drivers installed and does not support the audio feature.

Connection to the LaCie Ethernet Disk using Remote Desktop should only be used for setting up your firewall, scheduling a backup to a shared directory over the network (i.e. to another NAS), or troubleshooting.

Supported Operating Systems

- Mac OS X version 10.2.8 or later
- Windows 9x/Me/NT4/W2K/XP

Windows XP comes with the Remote Desktop software pre-installed. For earlier version of Windows you can find the software for download at Microsoft's website: http://www.microsoft.com/windowsxp/downloads/tools/rdclientdl.mspx

The Macintosh version of the software is available from Microsoft's Mactopia website: http://www.microsoft.com/mac

11.1. Accessing the LaCie Shell Using Remote Desktop (Windows)

First make sure you have the Remote Desktop client installed on your system. If you have a Windows version earlier than Windows XP you will need to download it from Microsoft's website and then install it.

1. Click on Start, point to Programs, point to Accessories, point to Communications and then click **Remote Desktop Connection**.
2. In the Remote Desktop Connection dialog Computer field enter the IP address of the LaCie Ethernet Disk, and click **Connect** (*Fig. 55*).
3. In the LaCie Log On dialog Type in the Administrator username and password, and click **OK** (*Fig. 56*).

The LaCie Shell then appears (*Fig. 57*).

Fig. 55

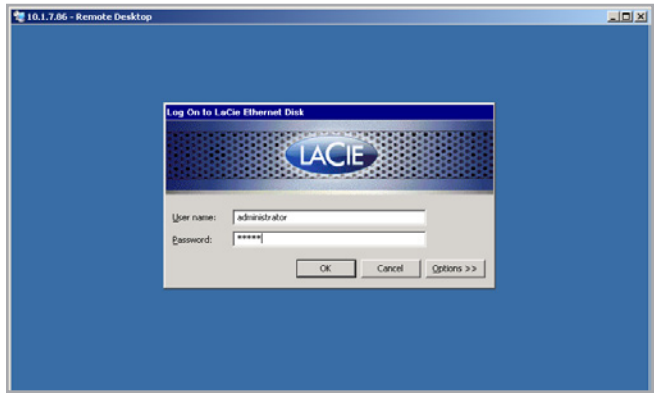


Fig. 56

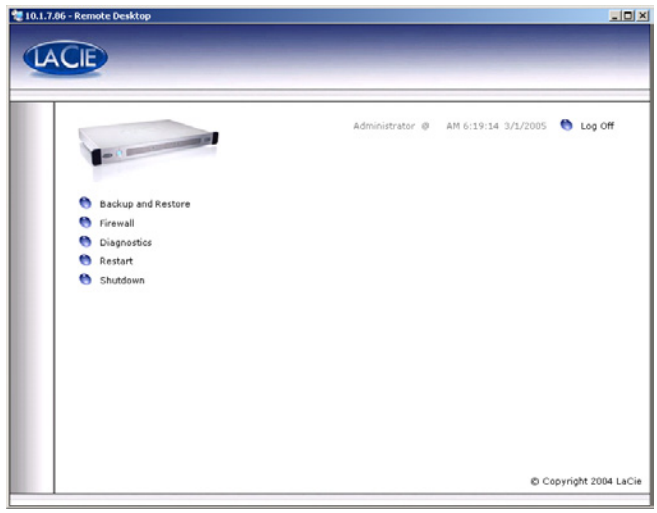


Fig. 57

11.2. Accessing the LaCie Shell Using Remote Desktop for Mac OS X

First, download and install the Remote Desktop client from Microsoft's website: http://www.microsoft.com/mac.

1. Locate the installation folder and double-click on the **Remote Desktop Connection** icon (*Fig. 58*).
2. In the Remote Desktop Connection dialog Computer field enter the IP address of the LaCie Ethernet Disk, and click **Connect** (*Fig. 59*).
3. In the LaCie Log On dialog Type in the Administrator username and password, and click **OK** (*Fig. 60*).

The LaCie Shell then appears (*Fig. 61*).

Fig. 58

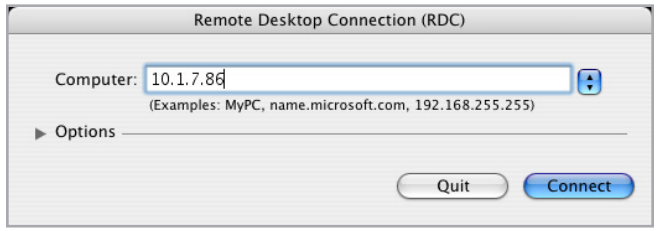


Fig. 59

Fig. 60

Fig. 61

11.3. Firewall

To configure the firewall of the Ethernet Disk

1. Click on the **Firewall** button.
2. In the LaCie Ethernet Disk Firewall dialog that appears select the desired settings in each section of the dialog.
3. Click **Apply Settings**, then
4. Click **Quit**.

Fig. 62

11.4. Back Up the LaCie Ethernet Disk onto other NAS Devices

Using the Remote Desktop connection, it is possible to back up the LaCie Ethernet Disk onto another network-attached storage (NAS) device. From the **Backup and Restore** menu (*Fig. 62*), follow these steps to initiate a backup:

1. Select the **Backup Wizard (Advanced)** button (*Fig. 63*).
2. In the Wizard that opens, click **Next** (*Fig. 64*).
3. Select either to back up all the Ethernet Disk's data or selected files. This guide will explain the steps for backing up all the Ethernet Disk's data. Click **Next** (*Fig. 65*).

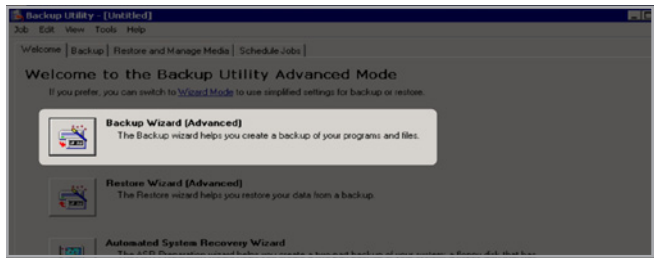

Welcome to the Backup Utility Advanced Mode
Backup Wizard (Advanced)
The Backup wizard helps you create a backup of your programs and files.
Restore Wizard (Advanced)
The Restore wizard helps you restore your data from a backup.
Automated System Recovery Wizard

Fig. 63

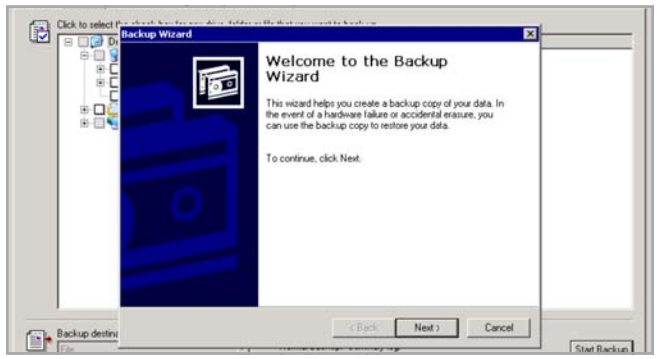

Backup Wizard
Welcome to the Backup Wizard
This wizard helps you create a backup copy of your data. In the event of a hardware failure or accidental erasure, you can use the backup copy to restore your data.
To continue, click Next.
< Back
Next >
Cancel

Fig. 64

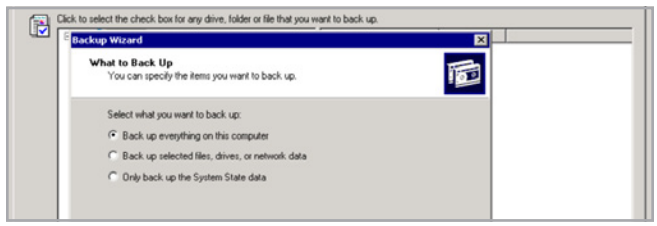

Click to select the check box for any drive, folder or file that you want to back up.
Backup Wizard
What to Back Up
You can specify the items you want to back up.
Select what you want to back up:
Back up everything on this computer
Back up selected files, drives, or network data
Only back up the System State data

Fig. 65

4. In the dialogue window that opens, click on **Browse** and navigate to the target volume on which to backup your Ethernet Disk and click **Open** (*Fig. 66*).

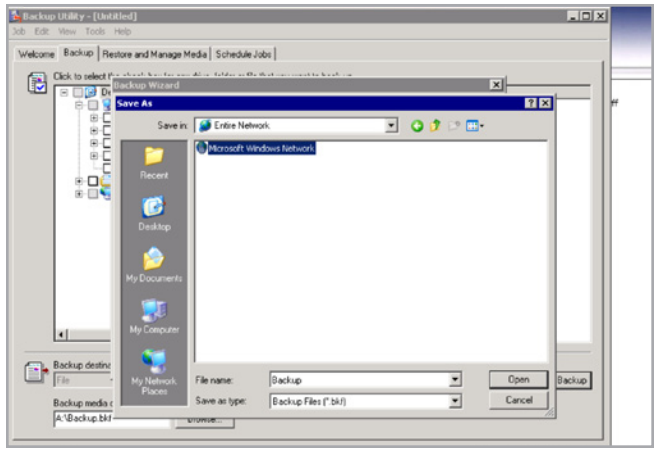


Fig. 66

5. Type a name for the backup and click **Next** (*Fig. 67*).

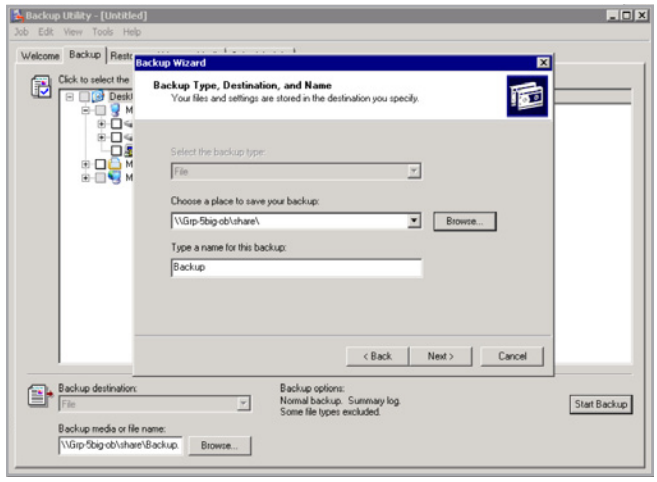


Fig. 67

6. Review the information to make sure it is correct. Optional: Select **Advanced** to modify other parameters such as scheduling (*Fig. 68*).

7. Click **Finish** and the backup will begin.

Backup Wizard
Completing the Backup Wizard
You have created the following backup settings:
Description: Set created 11/14/2008 at 2:03 PM
Contents: Back up all files on my local drive(s)
Location: File
Media: \\Grp-5big-ob\share\Backup.bkf
When: Now
Verify off. Do not use hardware compression.
Append to my media. Normal backup.
To close this wizard and start the backup, click Finish.
To specify additional backup options, click Advanced.
Advanced...
< Back
Finish
Cancel

Fig. 68

11.5. Diagnostics

When you click on the Diagnostics button it displays the System Log (*Fig. 69*).

11.5.1.

Click on the **System Log** button to display system messages and errors. If you are unfamiliar with Windows error messages, or have any questions about errors you see here, contact LaCie Technical support.

There are three types of messages: errors, warnings, and information. For each event the date, time, source, and an ID are given.

The System Log is also available from the Status tab in the web Administration application.

11.5.2.

Click on the **Information** button to display the current settings of the Ethernet Disk (*Fig. 70*).

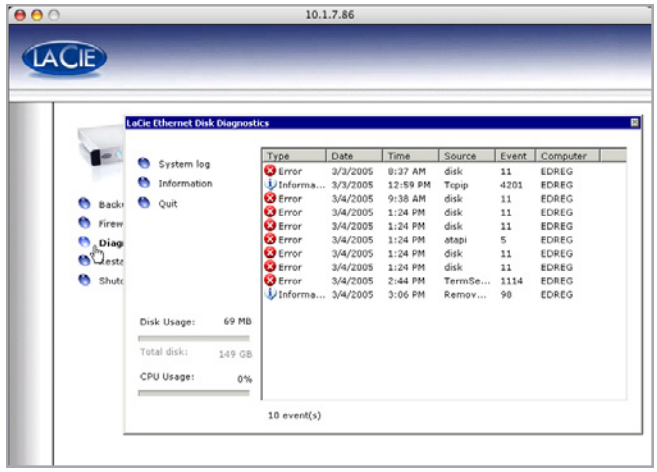


Fig. 69

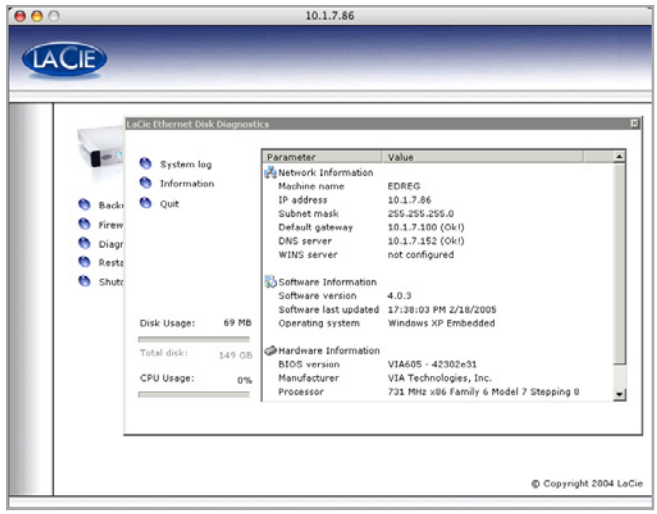


Fig. 70

11.5.3.

Clicking on the **Backup and Restore** button displays the standard Windows Backup and Restore Wizard (*Fig. 71*). LaCie recommends that you use the Web Administration Backup options described in sections *9.9. Backing Up LaCie Ethernet Disk Using the Built-In Backup Engine* and *9.10. Backing Up Disks Using Third-party Software Programs*.

Please contact LaCie Technical Support before attempting any restore of the Ethernet Disk, they will advise you whether to use this Wizard, or the one of the methods described in section *9.12. Restoring Your LaCie Ethernet Disk* or section *14. Restoring Your Ethernet Disk Using the LaCie Restore CD*.

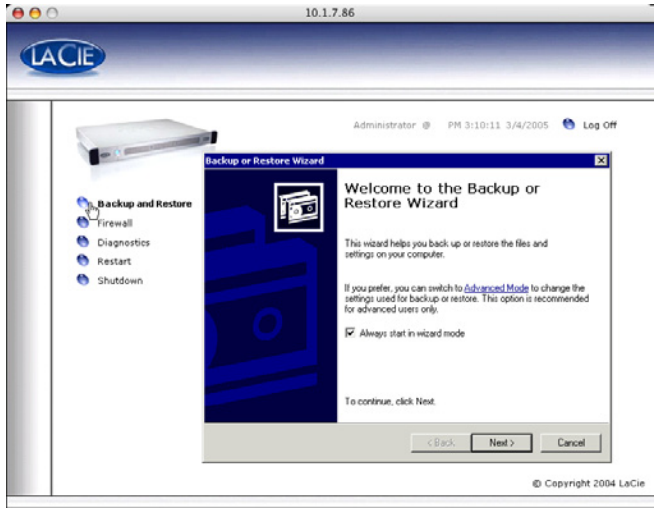

10.1.7.86
LACIE
Administrator @ PM 3:10:11 3/4/2005
Log Off
Backup and Restore
Firewall
Diagnostics
Restart
Shutdown
Backup or Restore Wizard
Welcome to the Backup or Restore Wizard
This wizard helps you back up or restore the files and settings on your computer.
If you prefer, you can switch to Advanced Mode to change the settings used for backup or restore. This option is recommended for advanced users only.
Always start in wizard mode
To continue, click Next.
< Back
Next >
Cancel
© Copyright 2004 LaCie

Fig. 71

11.6. Logging Off the System via Remote Desktop (Windows and Macintosh)

If you click the Close button of the Remote Desktop window, you'll be prompted to disconnect from the remote system (*Fig. 72*).

It's important to understand that disconnecting is not the same as logging off the computer. When you disconnect, any applications you have open on the screen will still be running on the remote system. This means that you can reconnect at a later time and pick up where you left off last time. So to log off the system, click the **Log Off** button on the screen (*Fig. 73*). Doing so will have the same effect as logging off your system normally and will terminate any applications you may have opened. This is the most secure way of ending a Remote Desktop session, and is the recommended way to log off the system.

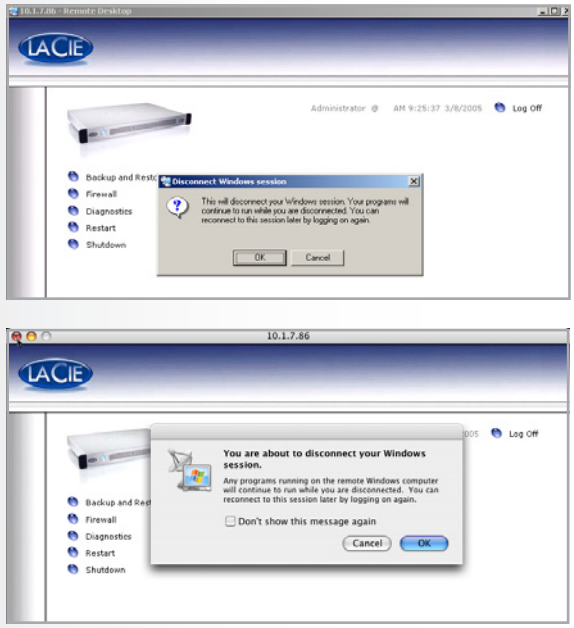

Disconnect Windows session
This will disconnect your Windows session. Your programs will continue to run while you are disconnected. You can reconnect to this session later by logging on again.
OK
Cancel
Backup and Restore
Firewall
Diagnostics
Restart
Shutdown
Log Off
10.1.7.86
You are about to disconnect your Windows session.
Any programs running on the remote Windows computer will continue to run while you are disconnected. You can reconnect to this session later by logging on again.
Don't show this message again
Cancel
OK

Fig. 72

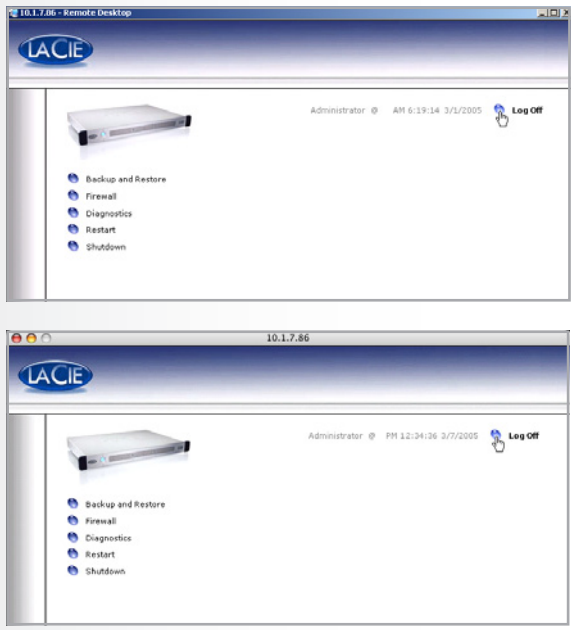


Fig. 73

12. Troubleshooting

In the event that your LaCie Ethernet Disk is not working correctly, please refer to the following checklist to find out where the problem is coming from. If you have gone through all of the points on the checklist and your drive is still not working correctly, please have a look at the FAQs that are regularly published on our Web site – www.lacie.com. One of these FAQs may provide an answer to your specific question. You can also visit the drivers page, where the most recent software updates are available.

If you need further assistance, please contact your LaCie reseller or LaCie Technical Support (see *13. Contacting Customer Support* for details).

Manual Updates

LaCie is constantly striving to give you the most up-to-date, comprehensive User's Manuals available on the market. It is our goal to provide you with a friendly, easy-to-use format that will help you quickly install and utilize the many functions of your new device.

If this manual does not reflect the configurations of the product that you purchased, please check our Web site for the most current version available.

Issue	Possible Solution
The LaCie Ethernet Disk is not seen by the LaCie Network Assistant.	From the LaCie Network Assistant, press the Refresh list button and wait about a minute. If it still is not seen, your network (routers, switches, etc.) is stopping UDP broadcasts that are required for the Network Assistant to find the LaCie Ethernet Disk. In this case, connect the LaCie Ethernet Disk directly into the same hub as your workstation and try again. If this still does not work, connect your LaCie Ethernet Disk to your workstation with a crossed Ethernet cable and try again.
Retrieving the IP address of the LaCie Ethernet Disk while in DCHP.	Use the LaCie Network Assistant. You will see all of the related information about your LaCie Ethernet Disk on the right panel of the Assistant: when you open the LaCie Network Assistant, you will see a list of all of the (LaCie only) NAS servers running on your network. When you browse through this list, all of the related information about the network, including IP addresses, will be displayed in the right panel of the window. **IMPORTANT INFO:** If you are operating in a Windows environment, you can use a command prompt to perform this function, instead of using the LaCie Network Assistant. Open a command prompt, and type: "ping [nas_name]", and you will see the LaCie Ethernet Disk's IP address.
The LaCie Ethernet Disk can not be formatted or defragmented.	Some files may be locked due to being accessed by an operation. It is recommended that system intensive operations such as formatting and defragmenting be performed immediately after rebooting the LaCie Ethernet Disk.
How do you back up the LaCie Ethernet Disk?	The LaCie Ethernet Disk can be backed up to a direct-attached hard drive using the included backup software program. Alternatively, the LaCie Ethernet Disk can be backed up over the network from a workstation or a remote server, with a connected backup device, such as a tape drive or hard drive. The easiest way to achieve this is to create a group, and then assign permission and grant access to only that particular group.

Issue	Possible Solution
How do you grant access to a few users, while restricting others, on the same network?	Make sure that there is not an existing share with the same name. Go the Web Administration Page and click on the Share tab to verify that there is not a share with that same name. Even if you cannot see the share, it may exist on a removable mass storage device. If this is the case, and the device is not plugged in, the share names will still be in the registry of your LaCie Ethernet Disk. In this instance, you will need to delete the "broken share" (see *8.3.4. Deleting a Broken Share* for more information) before creating the share again.
A share cannot be created with a specific name.	Some Windows clients are unable to recognize disk space in excess of 2GB. This only affects the display, and not the "real" available free space.
Why does Windows sometimes report inaccurate free space?	Install the LaCie Ethernet Disks individually, one at a time. Make sure that you change the name of the LaCie Ethernet Disk before installing the next one. There will be a conflict if the names are not unique.
Error messages when attempting to transfer data.	If you are using Mac OS 9.x, all file and folder names must be less than 27 characters in length. Make sure that all file and folder names are under 27 characters. If you are operating in an environment where both Mac OS 9.x and Mac OS 10.x are being employed, the same limitation applies. If you are using Mac OS 10.x and you get this error this may be caused by using characters in file names that Microsoft Windows operating systems do not allow. If you frequently share files with Windows-based computers, you will need to follow these naming protocols: These characters cannot be used in share, filer, folder or drive names: ? [ ] \ / = + < > ; : " , | *

13. Contacting Customer Support

1. Read the manuals and review section *12. Troubleshooting*.
2. Try to isolate the problem. If possible, make the drive the only external device on the CPU, and make sure that all of the cables are correctly and firmly attached.

If you have asked yourself all of the pertinent questions in the troubleshooting checklist, and you still can't get your LaCie drive to work properly, contact us via the provided Web link. Before contacting us, make sure that you are in front of your computer and that you have the following information on hand:

- Your LaCie drive's serial number
- Operating system(Mac OS or Windows) and version
- Computer brand and model
- Names of CD or DVD drives installed on your computer
- Amount of memory installed
- Names of any other devices installed on your computer

13.1. LaCie Technical Support Contacts

LaCie Asia, Singapore, and Hong Kong Contact us at: http://www.lacie.com/asia/contact/	LaCie Australia Contact us at: http://www.lacie.com/au/contact/
LaCie Belgium Contact us at: http://www.lacie.com/be/contact/ (Français)	LaCie Canada Contact us at: http://www.lacie.com/caen/contact/ (English)
LaCie Denmark Contact us at: http://www.lacie.com/dk/contact	LaCie Finland Contact us at: http://www.lacie.com/fi/contact/
LaCie France Contact us at: http://www.lacie.com/fr/contact/	LaCie Germany Contact us at: http://www.lacie.com/de/contact/
LaCie Italy Contact us at: http://www.lacie.com/it/contact/	LaCie Japan Contact us at: http://www.lacie.com/jp/contact/
LaCie Netherlands Contact us at: http://www.lacie.com/nl/contact/	LaCie Norway Contact us at: http://www.lacie.com/no/contact/
LaCie Spain Contact us at: http://www.lacie.com/es/contact/	LaCie Sweden Contact us at: http://www.lacie.com/se/contact
LaCie Switzerland Contact us at: http://www.lacie.com/chfr/contact/ (Français)	LaCie United Kingdom Contact us at: http://www.lacie.com/uk/contact/
LaCie Ireland Contact us at: http://www.lacie.com/ie/contact/	LaCie USA Contact us at: http://www.lacie.com/contact/
LaCie International Contact us at: http://www.lacie.com/intl/contact/	

14. Restoring Your Ethernet Disk Using the LaCie Restore CD

In the event that LaCie Technical Support asks you to restore your Ethernet Disk from CD please use the steps outlined below.

IMPORTANT INFO: Restoring will erase all data from the Ethernet Disk; therefore whenever possible backup your data before restoring from CD.

1. Whenever possible first back up the data from the Ethernet Disk, and note down what version of Ethernet Disk software you are using.
2. Connect a monitor to the VGA video port (see section *2.4. Rear Panel*), a mouse to either the mouse port (Windows) or one of the Hi-Speed USB 2.0 ports, and optionally a keyboard to either the keyboard port (Windows) or one of the Hi-Speed USB 2.0 ports on the back of the Ethernet Disk.
3. Connect an external USB CD-ROM drive to one of the Hi-Speed USB 2.0 ports of the Ethernet Disk.
4. Insert the "Restore CD" and restart the Ethernet Disk.
5. Check that the system is booting from the CD (*Fig. 74*).

TECHNICAL NOTE: If the Ethernet Disk does not boot from the USB CD-ROM drive, Edit the BIOS configuration by pressing the "Del" button at startup and make sure that the "First Boot Device" option is set to "USB-CDROM" in the menu "Advanced BIOS Features".

Fig. 74

6. When you see the words "5. Ready" displayed in bold, click **Shutdown** (*Fig. 75*).

7. When prompted, disconnect the USB CD-ROM drive, and restart the system by pressing the power button on the front of the Ethernet Disk.

IMPORTANT INFO: The system will put itself through a number of reboots; DO NOT interrupt the system during these reboots.

After the final reboot the system will display the LaCie Ethernet Log On Screen (*Fig. 76*).

When the Ready Light on the front of the Ethernet Disk comes on, the restore process is complete.

8. Use the LaCie Network Assistant to configure your Ethernet Disk.

9. Using a Web browser access the Ethernet Disk and apply any LaCie Ethernet Disk software updates needed to restore the Ethernet Disk software up to the latest version.

10. Finally, restore your data from backup.

Fig. 75

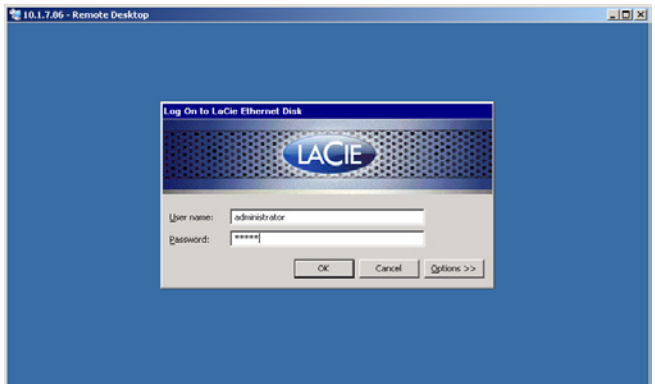


Fig. 76

15. Warranty

LaCie warrants your drive against any defect in material and workmanship, under normal use, for the period designated on your warranty certificate. In the event this product is found to be defective within the warranty period, LaCie will, at its option, repair or replace the defective drive. This warranty is void if:

- The drive was operated/stored in abnormal use or maintenance conditions;
- The drive is repaired, modified or altered, unless such repair, modification or alteration is expressly authorized in writing by LaCie;
- The drive was subjected to abuse, neglect, lightning strike, electrical fault, improper packaging or accident;
- The drive was installed improperly;
- The serial number of the drive is defaced or missing;
- The broken part is a replacement part such as a pickup tray, etc.
- The tamper seal on the drive casing is broken.

LaCie and its suppliers accept no liability for any loss of data during the use of this device, or for any of the problems caused as a result.

LaCie will not, under any circumstances, be liable for direct, special or consequential damages such as, but not limited to, damage or loss of property or equipment, loss of profits or revenues, cost of replacement goods, or expense or inconvenience caused by service interruptions.

Any loss, corruption or destruction of data while using a LaCie drive is the sole responsibility of the user, and under no circumstances will LaCie be held liable for the recovery or restoration of this data.

Under no circumstances will any person be entitled to any sum greater than the purchase price paid for the drive.

To obtain warranty service, call LaCie Technical Support. You will be asked to provide your LaCie product's serial number, and you may be asked to furnish proof of purchase to confirm that the drive is still under warranty.

All drives returned to LaCie must be securely packaged in their original box and shipped with postage prepaid.

IMPORTANT INFO: Register online for free technical support: www.lacie.com/register

16. Glossary

Backup – (1) The act of creating at least one additional copy of data onto a different (and safe) storage device from where it can be retrieved at a later time if needed. (2) A copy of a file, directory, or volume on a separate storage device from the original, for the purposes of retrieval in case the original is erased, damaged, or destroyed.

Bit – The smallest measure of computerized data, either a 1 or a 0. Eight bits equal one byte, or one character.

Block – A very small section of the storage media comprised of one or more sectors. A block is the smallest amount of space allocated on a drive for data storage. By default, a sector of data consists of 512 bytes.

Buffer – RAM cache that is faster than the data that is being delivered. Buffers are used so data may be stored and delivered to the receiving item as it is needed.

Bus – Electronic links that enable data to flow between the processor, RAM and extension cables (peripherals).

Byte – A sequence of adjacent binary digits, or bits, considered as a unit, 8 bits in length. There are 8 bits in 1 byte. See also MB (Megabyte) or GB (Gigabyte).

Cache, -ing – This is an area of electronic storage (usually RAM) set aside to store frequently used data from electromechanical storage (hard drives, floppy disks, CD/DVD-ROM, tape cartridges, etc.) Therefore, storing frequently used data in RAM can enhance your system's overall response to disk-intensive operations significantly.

Configuration – When talking about a PC, configuration is understood to be the sum of the internal and external components of the system, including memory, disk drives, the keyboard, the video subsystem and other peripherals, such as the mouse, modem or printer. The configuration also implies software: the operating system and various device managers (drivers), as well as hardware settings and options set by the user via configuration files.

Controller – This is a component or an electronic card (referred to in this case as a "controller card") that enables a computer to communicate with or manage certain peripherals. The controller manages the operation of the peripheral associated with it, and links the PC bus to the peripheral via a ribbon cable inside the PC. An external controller is an expansion card which fills one of the free slots inside your PC and which enables a peripheral (CD-ROM drive, scanner or printer, for instance) to be connected to the computer.

Cross-platform – Term that refers to a device that is able to be operated by both Mac and Windows operating systems.

Data Stream – The flow of data that accomplishes a task, usually related to moving data from storage to computer RAM or between storage devices.

Digital – Discrete information that can be broken down to zero or one bits.

Driver (peripheral manager) – A software component that enables the computer system to communicate with a peripheral. Most peripherals will not operate correctly – if at all – if the appropriate drivers are not installed on the system.

DHCP (Dynamic Host Configuration Protocol) – This is a communications protocol that allows network administrators to centrally manage and automate the assignment of Internet Protocol (IP) addresses in an organization's network. Using IP, each computer that connects to the Internet must have a unique IP address.

Ethernet – A LAN technology, based on the IEEE 802.3 standard. The most common Ethernet systems are 10BASE-T, which provides transmission speeds up to 10Mb/s, and 100BASE-T (also known as Fast Ethernet), which provides transmission speeds up to 100Mb/s, and Gigabit which provides 1000Mb/s (see also Gigabit Ethernet below).

File System – Links the physical map of a disc to its logical structure. Thanks to the file system, users and computers can easily display path, directories and files recorded onto the disc.

FTP (File Transfer Protocol) – This is a standard Internet protocol that uses the Internet's TCP/IP protocols to exchange files between computers on the Internet. It is commonly used to download programs and other files to a computer from a server.

Firmware – Permanent or semi-permanent instructions and data programmed directly into the circuitry of a program-

mable read-only memory or an electronically-erasable, programmable read-only memory chip. Used for controlling the operation of the computer or tape drive. Distinct from the software, which is stored in random access memory and can be altered.

Folder – A list created on a disk to store files. Creating folders and sub-folders enables you to organize the storage of your files in a logical, hierarchical manner so that you can find and manage them more easily.

Format, -ting, -ted – This is a process where a device is prepared to record data. In this process, the hard disk writes special information onto its own recording surfaces into areas (blocks) that are ready to accept user data. Since this operation causes all current user data stored on the hard disk to be lost, this is an infrequent operation that usually only happens at the factory that created the hard disk. It is unusual for something to happen to a hard disk that requires the end-user to initially perform this operation.

Gigabit – Unit of measure, commonly used to express the amount of data in one second between two points. E.g. in the term Gigabit Ethernet – 1 gigabit per second (1 Gbps) equals 1 billion bits per second and is equivalent to 1000Mb/s.

GB (GigaByte) – This value is normally associated with data storage capacity. Basically, it means a thousand million or a billion bytes. In fact, it equals 1,073,741,824 bytes (or 1,024 x 1,024 x 1,024).

Hardware – Physical components of a computer system, including the computer itself and peripherals such as printers, modems, mice, etc.

Host Bus Adapter (HBA) – A printed circuit board that installs in a standard microcomputer and an interface between the device controller and the computer. Also called a controller.

http (Hypertext Transfer Protocol) – This is the set of rules for exchanging files (i.e. text, images, audio, video, etc.) on the World Wide Web. http is an application protocol, relative to the TCP/IP suite of protocols that form the basis for exchanging information on the Internet.

Initialize, -ed, Initialization – After a hard drive (or other storage device) is formatted and partitioned, some special data needs to be written to it that helps the Mac and Windows create files and save data. The process is called initialization. This process, like formatting, causes all user data on the storage device to be lost.

Internet – A collection of networks whose users communicate with one another. Each communication carries the address of the source and destination networks and the particular machine within the network associated with the user or host computer on each end.

IP (Internet Protocol) – This is the protocol that controls how data is sent from one computer to another on the Internet.

IP Address – This is a number (either 32-bit for Internet Protocol Version 4, or 128-bit for Internet Protocol Version 6) that identifies each sender or receiver of information that is sent in packets across the Internet.

Interface – The protocol data transmitters, data receivers, logic and wiring that link one piece of computer equipment to another, such as a hard drive to an adapter or an adapter to a system bus. Protocol means a set of rules for operating the physical interface, such as: do not read or write before the drive is ready.

I/O (Input/Output) – Refers to an operation, program or device whose purpose is to enter data into or to extract data from a computer.

Kb (Kilobit) – Equivalent to 1,000 bits.

Kb/s – Kilobits per second. 480Kb/s is equal to 60KB/s.

KB (KiloByte) – Basically, this means 1,000 bytes, but it is actually 1,024 bytes.

KB/s – Kilobytes per second. A means of measuring throughput.

LAN (Local Area Network) – A group of computers and associated devices that share a common communication line and typically share the resources of a single processor or server within a small geographic area.

Mb (Megabit) – Equivalent to 1,000,000 bits.

Mb/s – Megabits per second. A means of measuring throughput. 480Mb/s is equal to 60MB/s.

MB (Megabyte) – Basically means one million bytes, but is actually 1,024 Kilobytes or 1,024 x 1,024 bytes, which equals 1,048,576 bytes.

MB/s – Megabytes per second. A means of measuring throughput.

Media – The material or device used to store information in a storage subsystem, such as a tape cartridge, CD, DVD or disk drive.

Network – A series of points or nodes interconnected by communication paths. Networks can interconnect with other networks and contain subnetworks.

Operating System (OS) – Software that controls the assignment and use of hardware resources such as memory, processor time, disk space and peripherals. An operating system is the basis on which software (applications) run. Windows, Mac OS and UNIX are among the most common.

Overwrite – To write data on top of existing data thus erasing the original data.

Partition, -ing – After formatting, the hard drive is not yet ready to store files. It must be divided into sections that will contain special information required for a Mac or PC to operate and other sections that will contain the files. This process of dividing up the hard drive is called partitioning. A partition is just one section of the hard drive that will contain either special data put there by Silverlining or other files and data.

Peripheral – A generic term applied to printers, scanners, mice, keyboards, serial ports, graphics cords, disk drives and other computer subsystems. This type of peripheral often relies on its own control software, known as a peripheral driver.

Port, hardware – A connection component (SCSI port, for example) that enables a microprocessor to communicate with a compatible peripheral.

Port, number – Used to identify a specific process to which an Internet or other network message is to be forwarded when it arrives at a server.

Port, software – A memory address that identifies the physical circuit used to transfer information between a microprocessor and a peripheral.

Protocol – In IT terminology, this describes the special set of rules that end points in a telecommunication connection use when they communicate.

RAM (Random Access Memory) – Generally referred to as a computer's "memory." An integrated circuit memory chip that allows information to be stored and retrieved by a microprocessor or controller. The information can be stored or accessed in any order, and all storage locations are equally accessible.

Seek Time – The amount of time (in thousandths of a second, or milliseconds) that it takes a hard drive's read/write head to move to a specific location on the disk. Average seek, then, is the average of a large number of random samplings all over the disk. Seek time is CPU independent, meaning that seek time is the same for a disk drive, whether it is attached to a computer or not.

Software – In a nutshell, software is a set of instructions for the computer. A set of instructions to perform a particular task is called a program. There are two main types of software: system software (an operating system such as Mac OS or Windows) which controls the operation of the computer and application software (programs such as Word or Excel) which enable users to perform tasks such as word processing, spreadsheet creation, graphics, etc.

Storage – In computers, any equipment in which information may be kept. PCs generally use disk units and other external storage media (diskettes, CD-ROMs, magnetic disks, etc.) for permanent storage of information.

Striping – Spreading data evenly over multiple disk drives to enhance performance. Data striping can be performed on a bit, byte or block basis for optimum application performance.

Subnetwork (Subnet) – This is a separate, identifiable part of a network, such as all of the computers at one geographic location, in one building or on the same local area network. Subnets make it possible to have an organization's network connected to the Internet with a single, shared network address.

Transfer Rate – The rate at which the drive sends and receives data from the controller. Transfer rates for reading data from the disk drive may not be the same as the transfer rate for writing data to the disk drive. Transfer rates are CPU dependent, meaning that regardless of how great a transfer rate your drive is capable of, the actual transfer rate can only be as fast as the slowest of your hard drive and computer.

TCP/IP (Transmission Control Protocol/Internet Protocol) – This is the basic communication protocol of the Internet. TCP/IP uses the client/server model of communication, in which a client (a computer user) requests and is provided a service (such as a Web page) by another computer (a server) in the network.

Volume – A desktop mountable storage area, may be a partition of a hard drive, a removable disk or a cartridge. Typically measured in Megabytes or Gigabytes.

UDP (User Datagram Protocol) – This is a communications protocol that allows a limited amount of service when messages are exchanged between computers in a network that

uses the Internet Protocol (IP). UDP uses the IP to get a data unit (a datagram) from one computer to another, but does not sequence the packets that the data arrives in. UDP also provides port numbers to distinguish different user requests, and an optional checksum capability to verify that the data arrived intact.

Utility – Software designed to perform maintenance tasks on the system or its components. Examples include backup programs, programs to retrieve files and data on disk, programs for preparing (or formatting) a disk or and resource editors.